



RICOH

Digital Full Color Copier

NC5006

**OPERATING
INSTRUCTIONS**

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical unit in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

Warning:

Use of controls or adjustment or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

Do not make copies of anything which is prohibited from copying by law. The following items are normally prohibited from copying by national law. Other items may be prohibited by local law.

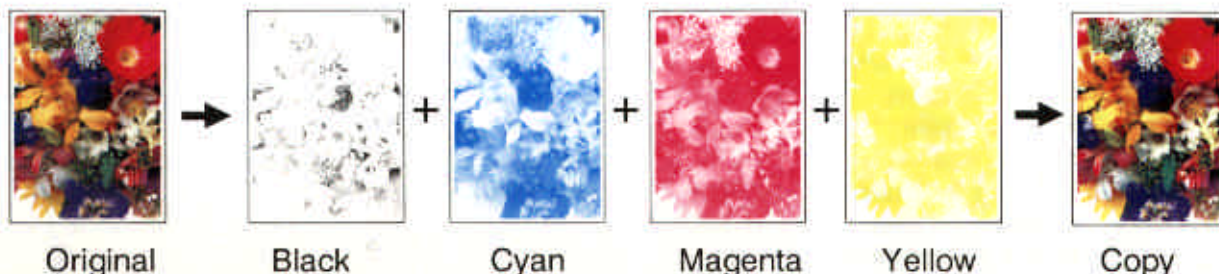
- Money • Stamps • Bonds • Stocks • Bank drafts
- Checks • Passports • Driver's licenses

HOW THIS DIGITAL COLOR COPIER WORKS

This copier scans, develops, and combines four single-color images (Black, Cyan, Magenta, and Yellow) into one full-color image. It then transfers the image to the copy paper.

Each scan breaks the image down into picture elements (dots) that are digitally processed by the copier and recombined into an image on the copier drum. Each dot is made on the drum by a laser beam.

Since the copier develops each color image separately, the copier must always position the images to keep them precisely aligned. Any vibration or movement while copying can disrupt the alignment of the four images and lower image quality.



- ☐ The copy samples in this Operating Instructions differ somewhat from actual copies due to printing effects.
- ☐ Some of the illustrations may be slightly different from your machine.

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"GENERAL INFORMATION"

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SAFETY INFORMATION

When using your copier, the following safety precautions should always be followed.

Safety During Operation

In this manual, all safety messages are identified by the words "WARNING" and "Caution". These words mean the following:

WARNING:

Important information to alert you to a situation that might cause serious injury and damage to your property if instructions are not followed.

Caution:

Important information that tells how to prevent damage to equipment, or how to avoid a situation that might cause minor injury.

WARNING:

- ☐ **Since some parts of the copier are supplied with high electrical voltage, touch only the parts specified in this manual and the machine's display.**
- ☐ **Do not modify or replace any parts other than the ones specified in this manual and the machine's display.**
- ☐ **Do not incinerate toner or toner containers. Toner dust may ignite when exposed to open flame.**
- ☐ **Do not store toner where it will be exposed to heat.**
- ☐ **Do not eat or swallow toner, and keep it out of reach of children.**
- ☐ **The fusing unit may be very hot. Be careful when handling it .**

Caution:

- ☐ *While copying, do not turn off the main switch.*
- ☐ *While copying, do not open the front doors.*
- ☐ *While copying, do not unplug the power cord.*
- ☐ *Do not lay anything weighing more than 5 kg (11 lb) on the exposure glass.*
- ☐ *Keep corrosive liquids, such as acid, off the machine.*
- ☐ *Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.*

General Safety Information

- ☐ Always turn the copier off when you have finished copying for the day, but leave it plugged in.
- ☐ When the copier will not be used for a long period, disconnect the power cord.
- ☐ If the copier must be transported by vehicle, please contact your service representative.
- ☐ When the main switch is in the Stand-by position, the anticondensation heaters are on. In case of emergency, unplug the machine's power cord.
- ☐ The main plug on this equipment must be pulled out to disconnect main power.

INSTALLATION REQUIREMENTS

Copier Environment

The installation location should be carefully chosen because environmental conditions greatly affect the performance of a copier.

– Optimum environment conditions –

- ☐ Temperature: 10 - 32°C (50 - 89°F)
- ☐ Humidity: 15 - 90%
- ☐ A strong and level base.
- ☐ The copier must be level within 5 mm (0.2") both front to rear and left to right.
- ☐ To avoid possible build-up of ozone, make sure to locate this copier in a large well ventilated room which has air turnover of more than 30m³/hr/person.

Environments To Avoid

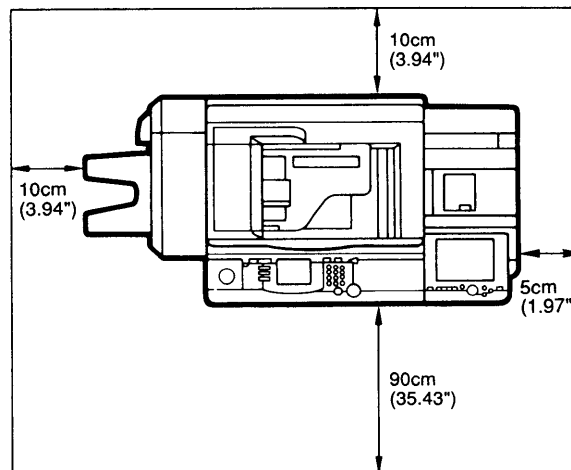
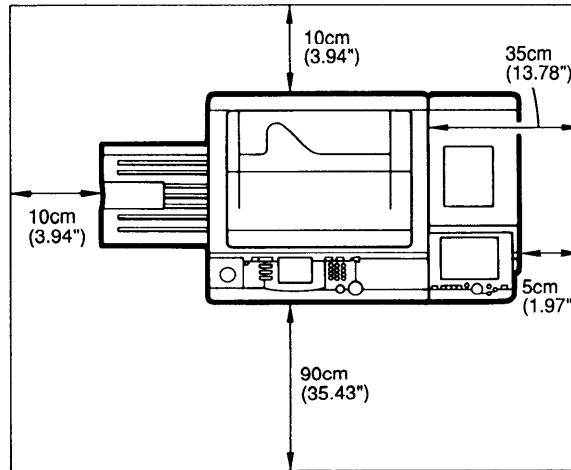
- ☐ Locations exposed to direct sunlight or strong light (more than 2,000 lux).
- ☐ Locations directly exposed to cool air from an air conditioner or heated air from a heater. (Sudden temperature changes may cause condensation within the copier.)
- ☐ Places where the copier may be subjected to frequent strong vibration.
- ☐ Dusty areas.
- ☐ Areas with corrosive gases.

Power Connection

- ☐ About the power source: see the inside of the front cover page.
- ☐ Avoid multiwiring.
- ☐ Make sure that the wall outlet is near the copier and easily accessible.
- ☐ Make sure the plug is firmly inserted in the outlet.
- ☐ Voltage must not fluctuate more than 10%.
- ☐ Do not set anything on the power cord.

Access To Copier

- Place the copier near the power source, providing clearance as shown:



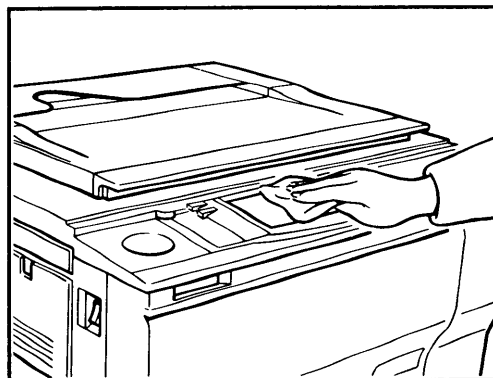
DAILY MAINTENANCE

To maintain high copy quality, clean the following parts and units regularly.

Copier

Touch Panel Display

Clean the touch panel display with a dry soft cloth.



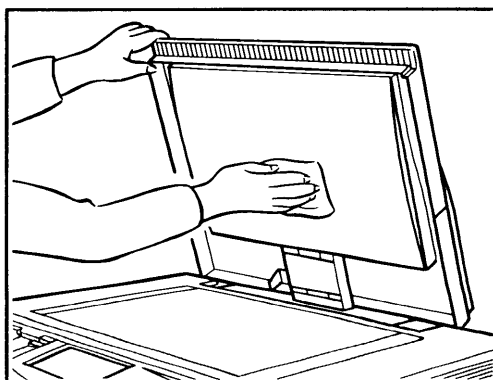
Exposure Glass

1. Lift the platen cover or dual job feeder.
2. Clean the exposure glass with a damp cloth and wipe it with a dry cloth.
 - If stains do not come off, use a glass cleaner. After using a glass cleaner, wipe it with a dry cloth.



Platen Cover

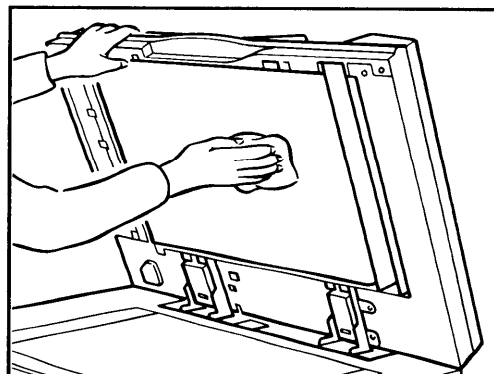
1. Lift the platen cover.
2. Clean the platen cover with a damp cloth and wipe it with a dry cloth.



Dual Job Feeder (Option)

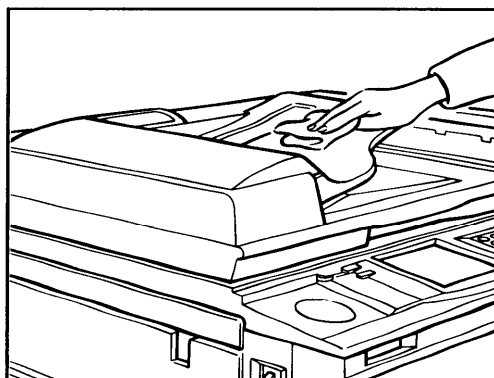
Belt

1. Lift the dual job feeder.
2. Clean the belt with a damp cloth and wipe it with a dry cloth.
 - ❑ If stains do not come off, use belt cleaner.



Feed-in Unit

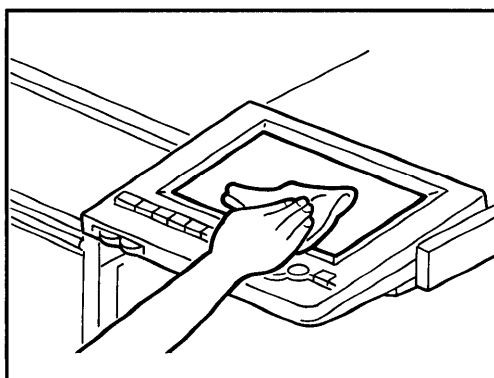
Clean the original table and original guide with a damp cloth and wipe them with a dry cloth.



Display Editor (Option)

Display

Clean the display of the display editor with a dry soft cloth.



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"USAGE"

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WHAT YOU CAN DO WITH THIS COPIER

☐ Note: Some of the color samples are adjusted to the maximum or minimum level to clarify the differences.

☐ Symbols:



means that you can select this mode for the entire original image.



means that you can select this mode for a specified area. (The optional display editor is required for designating an area.) For details about area editing, refer to Chapter 7.

Color Selection



Original



Full Color

☞ Page 5-3



Black Copy



☞ Page 5-3



Single Color

☞ Page 5-3



Yellow



Orange



Red



Magenta



Light-green



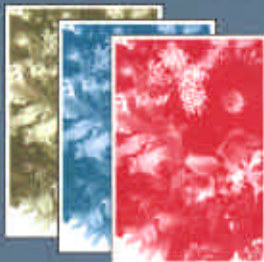
Green



Cyan



Blue



User Color 1, 2, 3



Scan Color

User Color

Up to 3 colors can be mixed manually and stored in memory.
(☞ Page 6-6)

Scan Color

You can scan in a color from an original.
(☞ Page 6-6)

Image Density Adjustment

☒ ☐ Auto Image Density

Page 5-4



Original



OFF



ON

☒ ☐ Manual Image Density

Page 5-4



Lighter Image



Original



Darker Image

Original Image Type (Letter/Photo) Selection

☒ ☐ Auto L/P Mode



Original with Photo and Letter parts

Page 5-5

☒ ☐ Letter Mode



Letter Original

Page 5-5

☒ ☐ Photo Mode



Photo Original

Page 5-5

Sorting/Stacking

The optional sorter is required.



Original

Sorting (4 sets)



Page 5-8

Stacking (4 copies)



Page 5-8

Copy Paper Selection

Auto Paper Selection


The machine will automatically select a suitable size of copy paper in the paper tray based on the original size and reproduction ratio.



Original



Selected Copy Paper

 **Page 5-6**



Manual Paper Selection

You can select the paper size from those available in the paper tray.



Original



Copy Paper



 **Page 5-6**

By-pass Feed Selection

 **Page 5-6**

Use the by-pass feed tray when copying to:

- ☐ Standard size paper which is not set in the paper tray
- ☐ Small size paper which cannot be set in the paper tray
- ☐ Non-standard size paper
- ☐ OHP transparencies
- ☐ Thick paper, adhesive labels

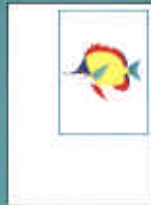
Reduction/Enlargement

Standard Reduction And Enlargement

- ☐ Methods:
 Preset %
 Zoom
 Size Magnification

Min: 25% Max: 400%

Page 5-9



Reduce



Full Size



Enlarge

Auto Reduction And Enlargement

The machine can automatically calculate the reproduction ratio.

Page 5-9



Original



Selected Copy Paper



Special Reduction/Enlargement

Directional Magnification

You can specify a different reproduction ratio for each direction.

Page 5-11



Original



Poster Making

You can enlarge the complete image onto several sheets.

Page 5-12



Original



Image Shifting

Centering/Cornering

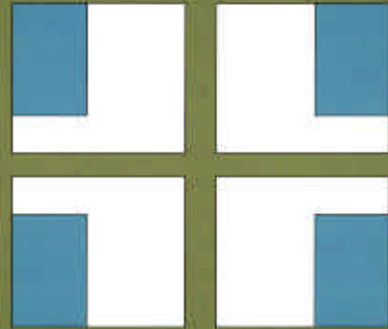


Centering

Page 5-13



Original



Cornering

Margin Adjustment

You can shift the image either left or right to make a binding margin.



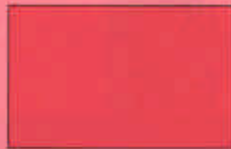
Original



Erase Center/Border

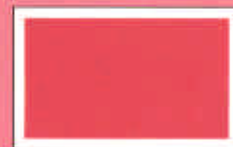
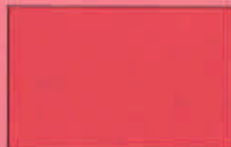
Erase Center

Page 5-14



Erase Border

Page 5-14



Erase Center And Border

Page 5-14



Series Copying

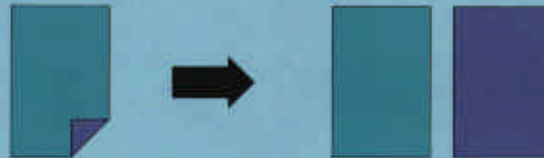
Book Original To
Two 1-sided Copies

☞ Page 5-15



2-sided Originals To
Two 1-sided Copies

☞ Page 5-16



Combine Two Originals
On One Sheet

☞ Page 5-16



2
USAGE

Color Creation

■ ■ Color
Conversion

Original



(Blue to Magenta)



☞ Page 5-17

■ ■ Color Erase

Original



(Erase Yellow)



Original



(Erase Green)



☞ Page 5-18

■ ■ Color
Background

Original

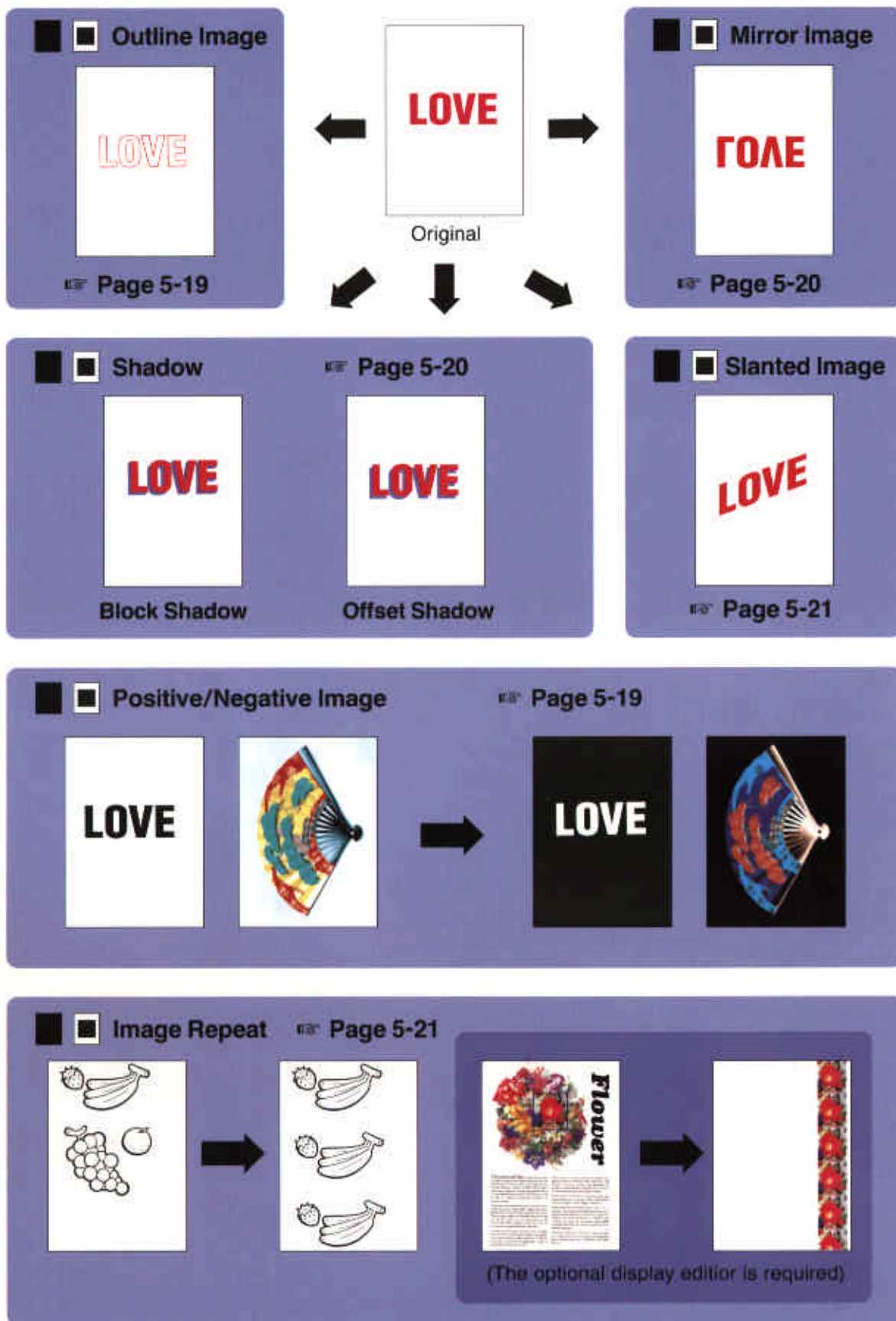


(Yellow Background)



☞ Page 5-18

Image Creation



Painting An Area

■ Paint Area

Page 7-20



Deleting An Area

■ Deleting Outside The Designated Area (Save Area)

Page 7-20



Original



(Designating The Area)



■ Deleting Inside The Designated Area (Delete Area)

Page 7-20



Original



(Designating The Area)



Image Adjustment

Sharp/Soft Page 6-2



Sharp



Soft

Contrast Page 6-2



Weak



Strong

Background Density Control Page 6-2



Light



Dark

Pastel Image Page 6-2



Normal

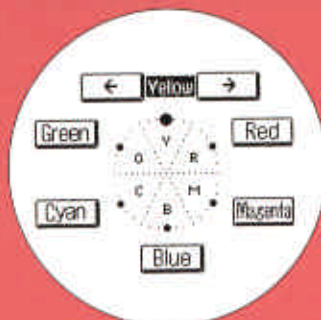


Light

Single Color Adjustment

Single Color Adjustment

For each of the colors in the circle, you can mix in one of the two adjacent colors. This will affect only image areas of the selected colors.



Page 6-5



Yellow-Green



Yellow



Yellow-Red

Color Balance Adjustment

Color Balance Adjustment

Original
Page 6-4

**Yellow: Dark
Cyan: Light
Magenta: Light
Black: Light**

**Yellow: Light
Cyan: Light
Magenta: Dark
Black: Light**

**Yellow: Light
Cyan: Dark
Magenta: Light
Black: Light**

**Yellow: Light
Cyan: Light
Magenta: Light
Black: Dark**

Color Balance Sample

Page 6-3

Original

Standard +4

Standard -4

Color Balance Memory

Page 6-4

You can store the color balance adjustment into memory.

User Color

User colors 1, 2, 3, and the scanned color can be selected for the following modes:

- Single Color Copying
- Color Conversion
- Color Background
- Paint

Mixing Colors Manually

Page 6-7

3 Basic Colors

Yellow 30% + Magenta 100% → "User Color"

Scanning In A Color

Page 6-6

(Scan)


"Scan Color" or "User Color"

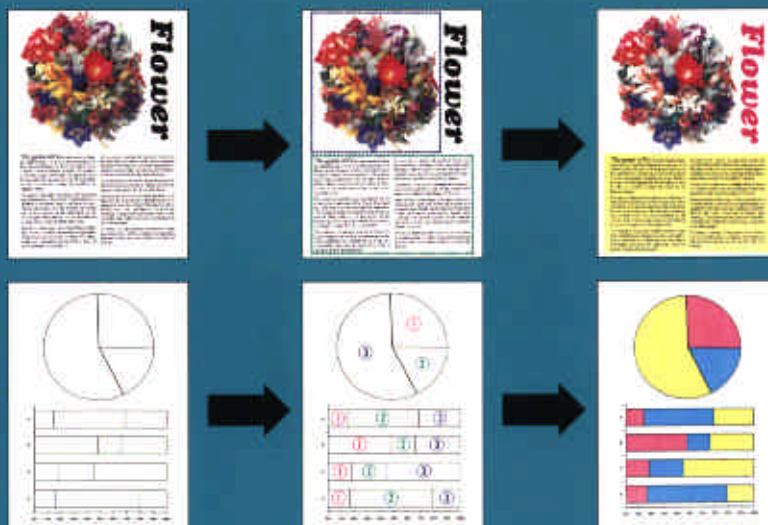
Specify the color to scan.
(The optional display editor is required)

Area Editing

☐ Creative Editing Color Editing

You can designate areas in the original and edit the areas independently from other areas.
(The optional display editor is required.)


 Chapter 7



Using The Projector

Making Copies From Film

You can make copies from a negative or positive film.
(The optional slide projector unit is required.)

 Chapter 10



Positive Film








Negative Film



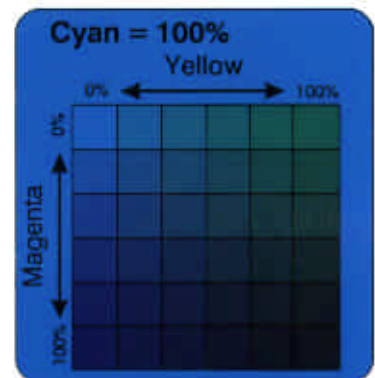
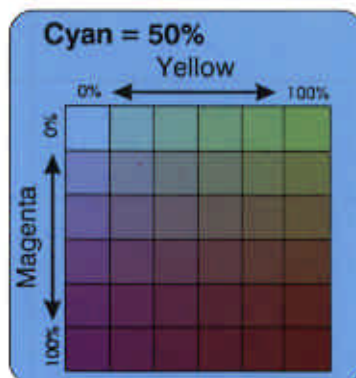
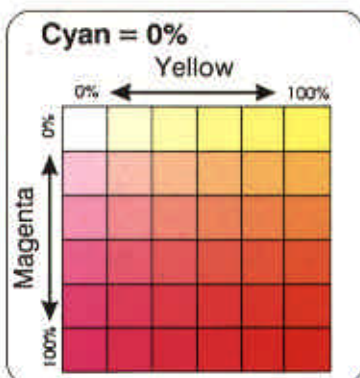
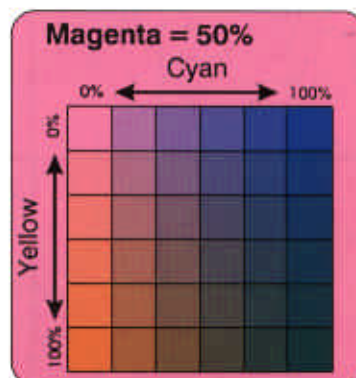
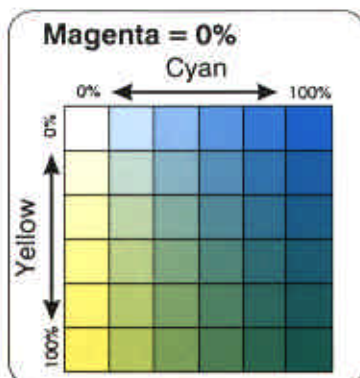
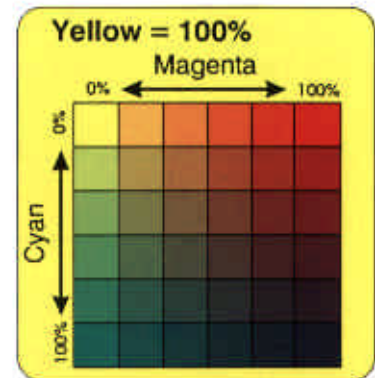
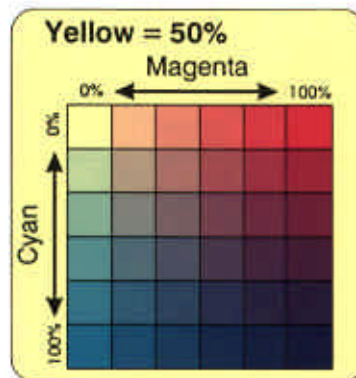
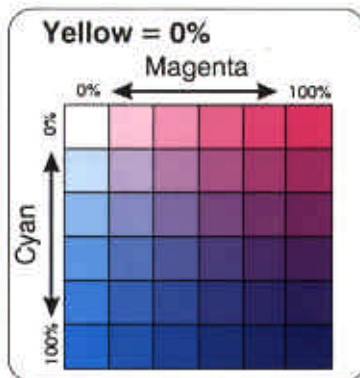
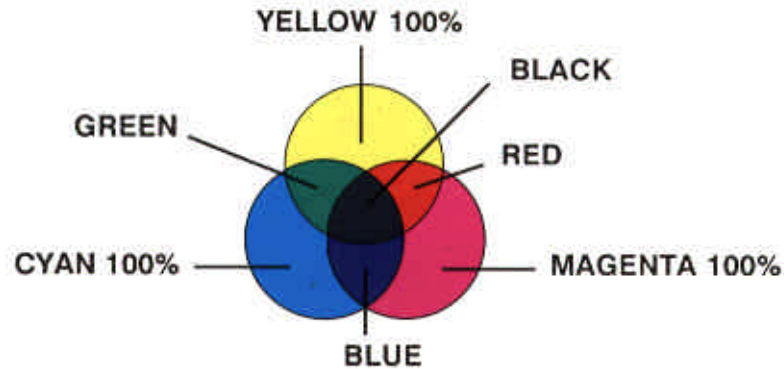
Copy

Others

- ☐ Interrupt One Job To Do Another
 Page 4-12
- ☐ Presetting The Copy Job (The optional dual job feeder is required.)
 Page 4-10
- ☐ Recalling The Previous Job Settings
 Page 4-12
- ☐ Saving Job Settings For Future Use (User Program)
 Page 4-13
- ☐ Using Authorization Codes (User Codes)
 Page 8-6

COLOR SAMPLE CHART

All of the colors are based on 3 colors - Yellow, Magenta, and Cyan. You can mix the basic colors to make your own color (User Color).



□ The color sample might differ somewhat from actual copies due to printing effects.

COMBINATION CHART

This combination chart shows which modes can be used together.

○: These modes can be used together.

✕: These modes cannot be used together.

*1: These modes can be used together only when "Black" is selected for the color of the shadow.

□ If you select modes which cannot be used together, an error message will appear on the touch panel display.

		Function selected second													
		Color Selection				Image Density Adjustment		Adjustment and Memory			Enlargement/Reproduction				
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Function selected first	1 Auto Color Selection	✕	✕	✕	✕	○	○	○	○	○	○	○	○	○	✕
	2 Full Color	✕	✕	✕	✕	○	○	○	○	○	○	○	○	○	○
	3 Black Copy	✕	✕	✕	✕	○	○	○	○	✕	○	○	○	○	○
	4 Single Color	✕	✕	✕	✕	○	○	○	○	✕	○	○	○	○	○
	5 Auto Image Density	✕	✕	○	○	✕	○	○	✕	✕	○	○	○	○	○
	6 Manual Image Density	○	○	○	○	✕	✕	○	○	○	○	○	○	○	○
	7 Image Adjustment	○	○	○	○	○	○	✕	○	✕	○	○	○	○	○
	8 Color Balance Adjustment	○	○	○	○	✕	○	○	✕	○	○	○	○	○	○
	9 Single Color Adjustment	○	○	✕	✕	✕	○	○	○	✕	○	○	○	○	○
	10 Preset R/E	○	○	○	○	○	○	○	○	○	✕	✕	✕	✕	✕
	11 Zoom	○	○	○	○	○	○	○	○	○	✕	✕	✕	✕	✕
	12 Size Magnification	○	○	○	○	○	○	○	○	○	✕	✕	✕	✕	✕
	13 Directional Magnification	○	○	○	○	○	○	○	○	○	✕	✕	✕	✕	✕
	14 Poster Making	✕	○	○	○	○	○	○	○	○	✕	✕	✕	✕	✕
	15 Centering/Cornering	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	16 Margin Adjustment	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	17 Center Erase	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	18 Border Erase	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	19 Center And Border Erase	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	20 Book To Two 1-sided	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	21 2-sided To Two 1-sided	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	22 Combine Two Originals	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	23 Color Conversion	✕	○	✕	✕	✕	○	○	○	✕	○	○	○	○	✕
	24 Color Erase	✕	○	○	○	✕	○	○	○	✕	○	○	○	○	✕
	25 Color Background	✕	○	○	○	✕	○	○	○	✕	○	○	○	○	✕
	26 Outline Image	○	○	○	○	○	○	✕	✕	✕	○	○	○	○	✕
	27 Positive/Negative Image	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	28 Shadow	✕	○	*1	○	○	○	○	○	○	○	○	○	○	✕
	29 Mirror Image	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	30 Slanted Image	○	○	○	○	○	○	○	○	○	○	○	○	○	✕
	31 Repeat Image	○	○	○	○	○	○	○	○	○	○	○	○	○	✕

Function selected second																
Image Positioning Erase Center/Border Series Copies								Color Creation			Image Creation					
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
○	○	○	○	○	○	○	○	×	×	×	○	○	×	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	×	○	×	○	○	*1	○	○	○
○	○	○	○	○	○	○	○	×	○	×	○	○	○	○	○	○
○	○	○	○	○	○	○	○	×	○	○	○	○	×	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	○	○
○	○	○	○	○	○	○	○	×	×	×	×	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
×	×	×	×	×	×	×	×	×	×	×	×	○	×	○	×	×
■	○	×	×	×	×	×	×	○	○	○	○	○	○	○	○	×
○	■	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×
×	○	■	×	×	×	×	○	○	○	○	○	○	○	○	○	×
×	○	×	■	×	○	○	○	○	○	○	○	○	○	○	○	×
×	○	×	×	■	×	×	○	○	○	○	○	○	○	○	○	×
×	○	×	○	×	■	×	×	○	○	○	×	×	×	×	×	×
○	○	×	○	×	×	■	×	○	○	○	×	×	×	×	×	×
×	○	○	○	○	×	×	■	○	○	○	×	×	×	×	×	×
○	○	○	○	○	○	○	○	■	○	○	×	○	○	○	○	○
○	○	○	○	○	○	○	○	○	■	○	×	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○	■	×	○	○	○	○	○
○	○	○	○	○	×	×	×	×	×	×	■	○	○	○	○	○
○	○	○	○	○	×	×	×	○	○	○	○	■	○	○	○	○
○	○	○	○	○	×	×	×	○	○	○	○	○	■	○	○	○
○	○	○	○	○	×	×	×	○	○	○	○	○	○	■	○	○
×	×	×	×	×	×	×	×	○	○	○	○	○	○	○	○	■

GUIDE TO COMPONENTS

Machine Exterior

USAGE 2

MAIN SWITCH

Switches the copier between on and stand-by conditions.

PLATEN COVER

Lower this cover over originals for copying

OPERATION PANEL

page 2-18

COPY TRAY

Completed copies are delivered here.

FRONT DOORS

Open to access the inside of the copier.

Open these doors when:

- removing misfed paper
- adding toner

POWER CORD

Unplug only when the copier will not be used for a long period.

BY-PASS FEED TRAY

Use to copy onto OHP transparencies, thick paper and other non-standard copy stock.

KEY COUNTER HOLDER

Insert the key counter (option) here.

PAPER TRAYS 1-3

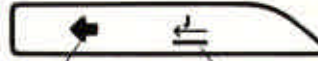
Each tray can hold 500 sheets.

Paper tray 1: Paper size and direction can be changed by the user.

Paper tray 2 & 3: Paper size and direction are fixed.

Advanced Systems

DUAL JOB FEEDER INDICATOR SCREEN



INSERT ORIGINAL INDICATOR

Insert originals into the dual job feeder when this indicator is on.

AUTO FEED INDICATOR

When you are setting one original at a time, this indicator stays on for a while after the first original is fed. This shows that the dual job feeder is ready for another original.

10-BIN SORTER

Page 5-8

ORIGINAL FEED-IN UNIT

Open this when removing misfed originals.

DUAL JOB FEEDER

Page 4-3

ORIGINAL GUIDE

Adjust this guide to center the originals so that they are correctly fed onto the exposure glass.

TOP COVER

Open to remove misfed paper.

PROOF TRAY

When not in the sort or stack mode, copies are delivered here.

SORTER BINS

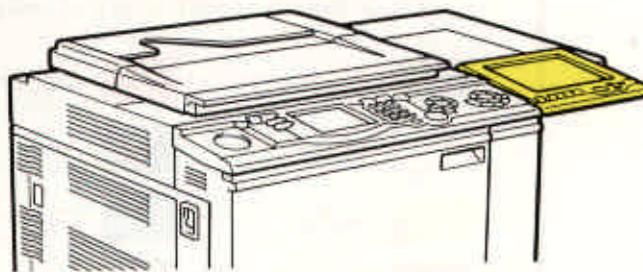
Copies are sorted or stacked here.

PROJECTOR UNIT

Chapter 10

DISPLAY EDITOR

Page 4-14, Chapter 7



Operation Panel

CONTRAST ADJUSTMENT DIAL

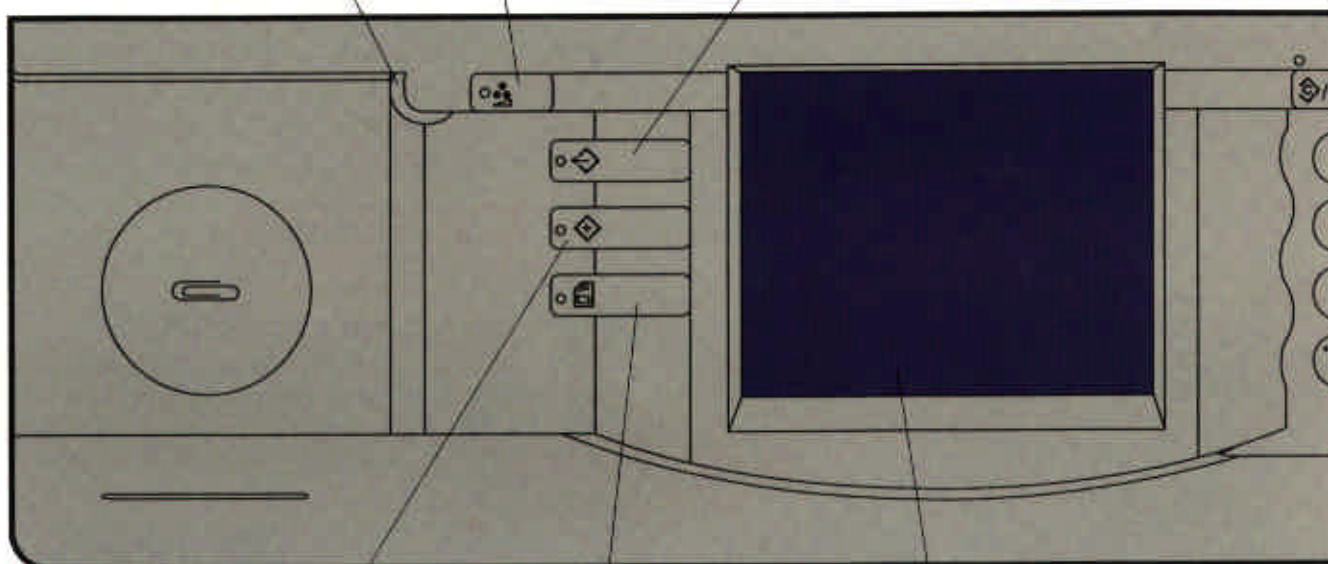
You can change the brightness of the display.

ADJUSTMENT/MEMORY KEY

Press to adjust the image or color balance, or to make user colors. **Chapter 6**

PROGRAM KEY

Press when storing copy job settings. **Page 4-13**



OPTION KEY

Press to use optional equipments such as the projector unit. **Chapter 10**

AREA EDITING KEY

Press to edit an area. **Chapter 7**

TOUCH PANEL DISPLAY

Page 2-20

Color Names

The colors can be selected not only with the color circle keys but also with keys in the touch panel display. On the touch panel display, the color names are shown as follows:

	Black		Magenta
	White		Blue
	Yellow		Cyan
	Orange		Green
	Red		Light-green

CLEAR MODES/STAND BY KEY

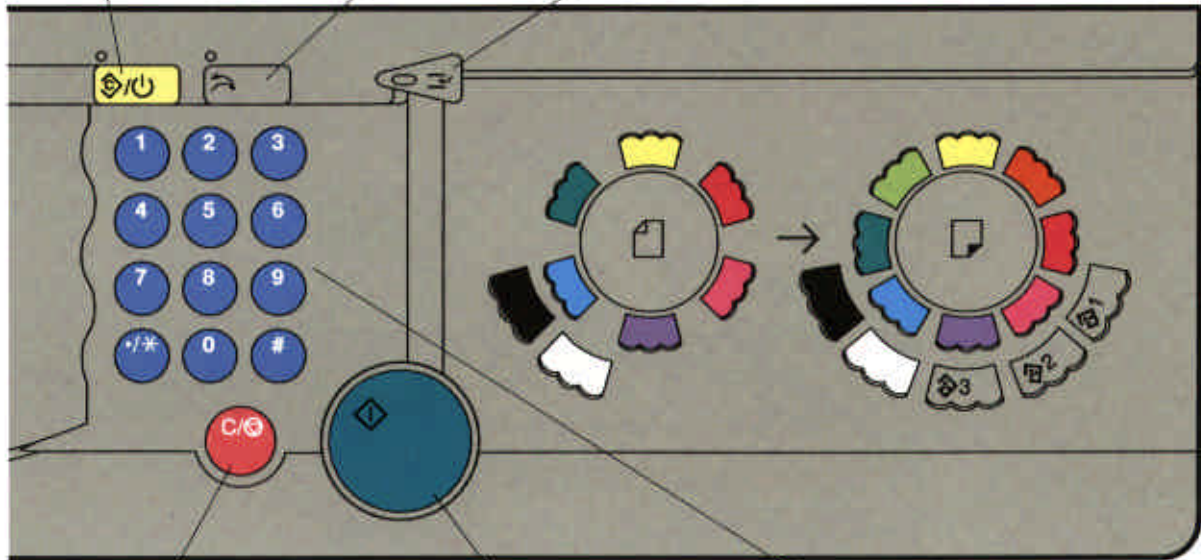
Press to clear the copier of previously entered settings and modes. Press for more than 2 seconds to enter the stand by mode. In stand by mode, the touch panel display turns off. Press this key again to use the touch panel display.

MEMORY CALL KEY

Press to recall the previously selected copy jobs.
 Page 4-12

INTERRUPT KEY

Press to interrupt a multicopy run to make urgently needed copies.
 Page 4-12



CLEAR/STOP KEY

Press to cancel the copy number entered. While copying, press to stop copying. This key is also used to clear data for selected modes.
 Page 4-12

START KEY

Press to start your job.

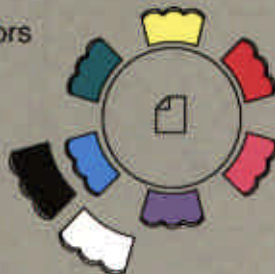
NUMBER (0-9) KEYS

Use to enter the desired number of copies. They are also used to enter data for selected modes.

COLOR CIRCLE KEYS

ORIGINAL COLOR CIRCLE KEYS

Select original colors with these keys.



COPY COLOR CIRCLE KEYS

Select desired colors for copying with these keys.



USER COLOR KEYS 1-3.

Touch Panel Display

Note:

Do not press on the touch panel display with any hard or sharp object (pen, pencil, etc.)
Always use your finger or something with a soft tip.

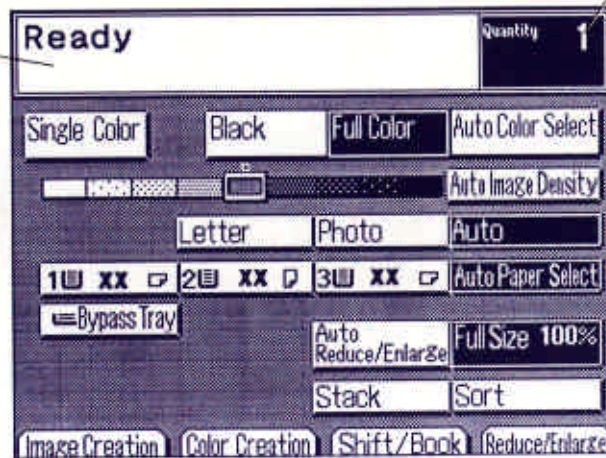


Key which can be selected.

Key which is selected.

Key which cannot be selected.

MESSAGE AREA



COPY COUNTER
Indicates the number of copies.

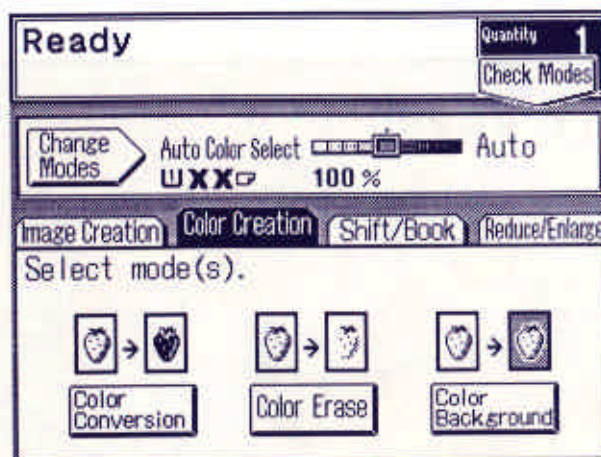
FUNCTIONS AND KEY TOPS



(Select Color Creation)

Color Creation

OPERATION SCREENS



FUNCTIONS QUICK REFERENCE

❑ Note: Not all of the key are shown here.



☞ page 4-11



☞ page 4-11



☞ page 4-11



☞ page 5-3



☞ page 5-4



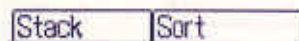
☞ page 5-5










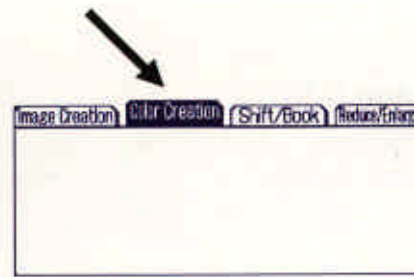



☞ page 5-6

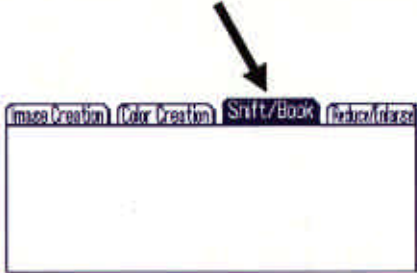


















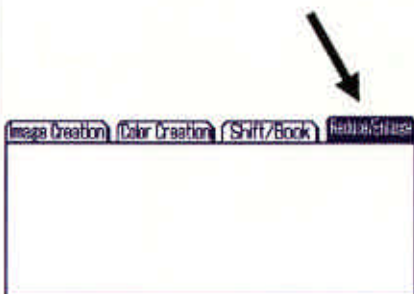





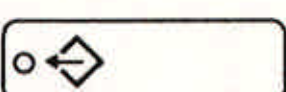
☞ page 5-9



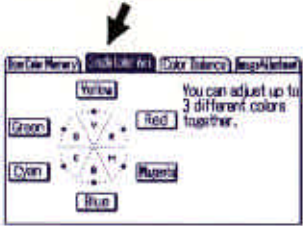
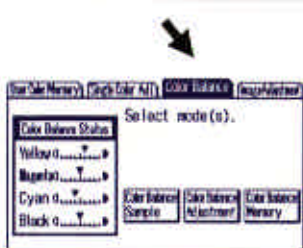
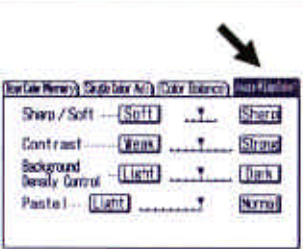




☞ page 5-8

Step 1	Step 2	Step 3	Page
	 Outline		5-19
	 Posi. Nega.		5-19
	 Shadow		5-20
	 Mirror		5-20
	 Slanted		5-21
	 Repeat		5-21
	 Color Conversion		5-17
	 Color Erase		5-18
	 Color Background		5-18

Step 1	Step 2	Step 3	Page
	 		5-13
	 		5-13
	 		5-14
	 		5-14
	 		5-14
	 		5-15
	 		5-16
	 		5-16

Step 1	Step 2	Step 3	Page
	Preset R/E		5-9
	Zoom		5-10
	Size Mag.		5-10
	D.Size Mag. Poster Mode	 Directional Size Mag.	5-11
		 Poster Mode	5-12
 AREA EDIT KEY	 Creative Editing		Chapter 7
	 Color Editing		Chapter 7
 PROGRAM KEY	Recall program		4-13
	Store program		4-13

Step 1	Step 2	Step 3	Page
 <p>ADJUST/MEMORY KEY</p>			6-6
			6-5
			6-3
			6-2
 <p>OPTION KEY</p>			Chapter 10

CHAPTER 3

"REPLENISHING SUPPLIES"

Table of Contents

USE AND STORAGE OF SUPPLIES	3-2
Use of Copy Paper	3-2
Paper Storage	3-2
Toner Storage	3-3
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SETTING PAPER ON THE BY-PASS FEED TRAY	3-6
CHANGING PAPER SIZE AND DIRECTION	3-8
ADDING TONER	3-10

USE AND STORAGE OF SUPPLIES

Use of Copy Paper

- ☐ For good copy quality, please use the type of paper and OHP transparencies recommended by your sales/service representative.

- Non-recommended copy paper -

The following types of copy paper are not recommended for this copier.

- Curled paper
- Wavy or creased paper
- Torn paper
- Damp paper
- Bound paper
- Tracing paper
- Any coated paper (carbon, thermal paper, etc.)
- Paper with low stiffness
- Extra smooth paper or paper that tends to stick together.
- Paper with low electrical resistance

- Others -

- ☐ To avoid paper misfeeds or copy image problems, do not use paper that has already been copied on as copy paper.
- ☐ We recommend using OHP transparencies made especially for color copying. Using other types of transparencies might lead to loss of brightness when the image is projected.
- ☐ Adhesive labels and OHP transparencies can be loaded only in the by-pass feed tray. When copying on adhesive labels, insert them one sheet at a time.
- ☐ Thick paper (104g/m² ~ 157g/m² or 28 ~ 42 lb) can be loaded only in the by-pass feed tray.
- ☐ When copying on rough surface paper, the copy image may be light.

Paper Storage

Paper should always be stored properly. Improperly stored paper may result in poor image reproduction, creased copies, and paper misfeeds.

- ☐ Avoid storing paper in humid areas. (Under high temperature and high humidity conditions, store copy paper in a vinyl bag.)
- ☐ Do not store paper where it will be exposed to heat.
- ☐ Store on a flat surface.
- ☐ Use older stock first.
- ☐ Do not lay heavy objects on paper.
- ☐ Keep open reams of paper in the package, and store them as you would unopened packages.

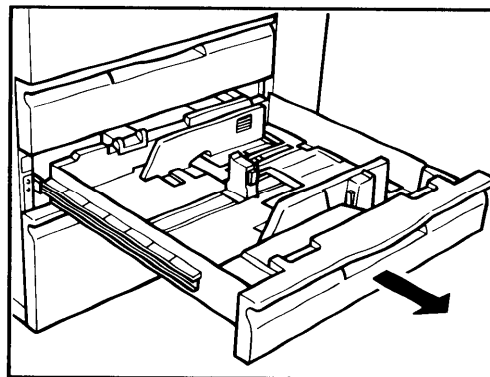
Toner Storage

- ☐ Store in a cool, dark place.
- ☐ Do not store toner where it will be exposed to heat.
- ☐ Do not lay anything heavy on toner.

LOADING PAPER ON THE PAPER TRAY

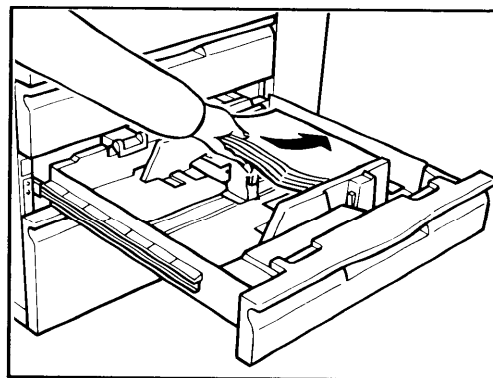
- ❑ Before loading paper on the paper tray, refer to the "Use Of Copy Paper" (page 3-2) for non-recommended types of paper.
- ❑ Acceptable paper weight: 64 ~104.7g/m² or 17 ~ 28 lb.
If the paper is heavier than this, use the by-pass feed tray. (☞ pages 3-6 and 5-6)
- ❑ If you use OHP transparencies or adhesive labels, use the by-pass feed tray.
(☞ pages 3-6 and 5-6)
- ❑ You can change the paper size and direction of the 1st tray.
☞ "Changing Paper Size and Direction" (page 3-8)
- ❑ Paper size and direction of the 2nd and 3rd tray are fixed. Load the fixed size paper in the paper tray.

1. Pull the paper tray out until it stops.

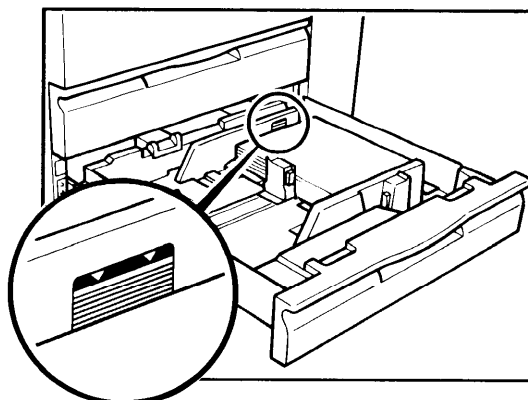


2. Load paper in the paper tray.

- ❑ The paper stack must be flush with the right side of the paper tray.
- ❑ Make sure to read the notice on the package showing the front side (copy side) of the paper. Load paper with the copy side down.

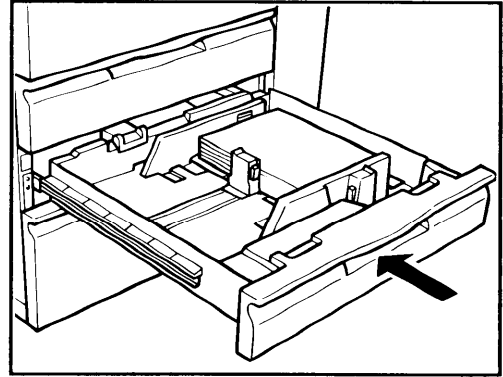


- ❑ Do not stack paper over the limit mark.



3. Push the tray in until it stops.

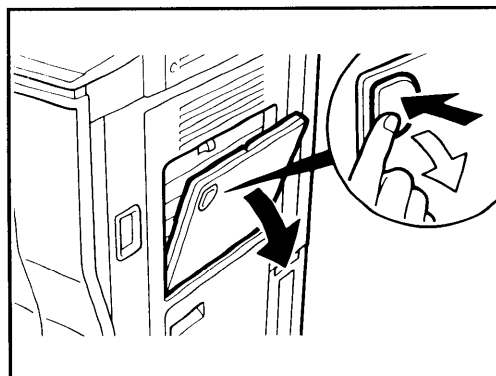
- ❑ Push the tray gently; otherwise the paper guides might move, possibly leading to paper being in the wrong position and to paper scewing.



SETTING PAPER ON THE BY-PASS FEED TRAY

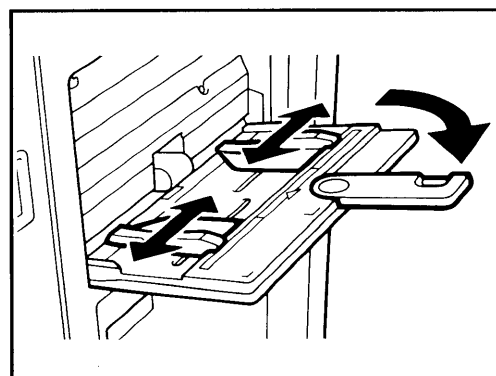
- ☐ Before setting the copy paper, read page 5-6 for detailed information about by-pass feed copying.
 - Check if the copy paper is suitable for by-pass feed copying.
 - Check which keys should be selected to match the copy paper type.
- ☐ Before setting the copy paper, refer to the "Use Of Copy Paper" (page 3-2) for non-recommended types of paper.

1. Push on the upper left corner of by-pass feed tray. The by-pass feed tray will open.



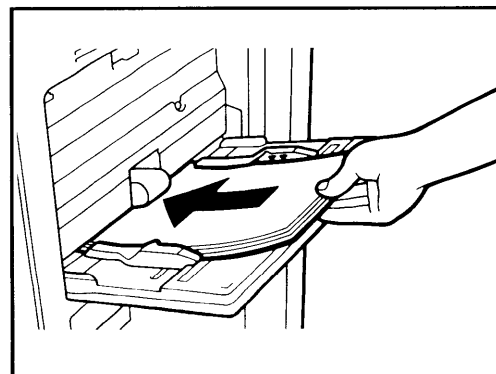
2. Adjust the paper guides to match the paper size and direction.

- ☐ If the paper guides do not match the paper width, the copy paper may be misfed or skewed.
- ☐ If you use large copy paper such as A3 or 11" x 17" size paper, pull out the paper support guide.



3. Insert the paper until it stops.

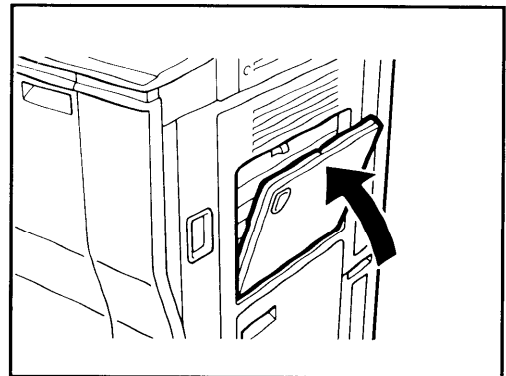
- ☐ Make sure to read the notice on the package showing the front side (copy side) of the paper. Load paper with the copy side up.
- ☐ Do not stack paper over the limit mark.
- ☐ If copying on adhesive labels, insert one sheet at a time.



- ☐ When using OHP transparencies, make sure to load the copy side up, otherwise fusing jams might occur.
There are types of transparencies that have the opposite side marked "up" because some copier models apply toner from underneath. This machine applies toner from above.
Check the label on the package, or contact your supplier to find the copy side.
- ☐ OHP transparencies should be fanned before loading to get air between the sheets.

4. Make copies.





5. After finishing copying, return the by-pass feed tray to its original position.



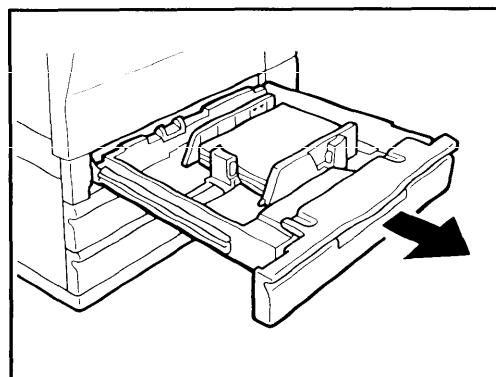
CHANGING PAPER SIZE AND DIRECTION

You can change the paper size and direction of the 1st tray. The paper size and direction of the 2nd and 3rd trays are fixed. If you want to change the paper size and direction of the 2nd and 3rd trays, please contact your sales/service representative.

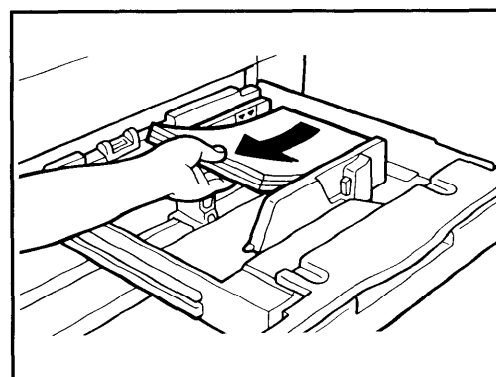
☐ Acceptable paper weight: 64 - 104.7 g/m², 17 - 28 lb

Tray		A4/A3 version	LT/DLT version
1st Tray		A3, A4, 8 1/2" x 13" (F4) 8 1/4" x 13"	11" x 17" (DLT), 11" x 15", 10" x 14", 8 1/2" x 14" (LG), 8" x 13" (F), 8 1/2" x 11" (LT), 8" x 10 1/2", 8" x 10"
		A4, A5	11" x 8 1/2" (LT), 8 1/2" x 5 1/2" (HLT)
2nd/3rd Tray		A3, B4, A4, B5, A5, 11" x 17" (DLT), 11" x 15", 10" x 14", 8 1/2" x 14" (LG), 8 1/2" x 13" (F4), 8 1/4" x 13", 8" x 13" (F), 8 1/2" x 11" (LT), 8" x 10 1/2", 8" x 10", 5 1/2" x 8 1/2" (HLT)	
		A4, B5, A5, 11" x 8 1/2" (LT), 8 1/2" x 5 1/2" (HLT)	

1. Pull the 1st paper tray out until it stops.

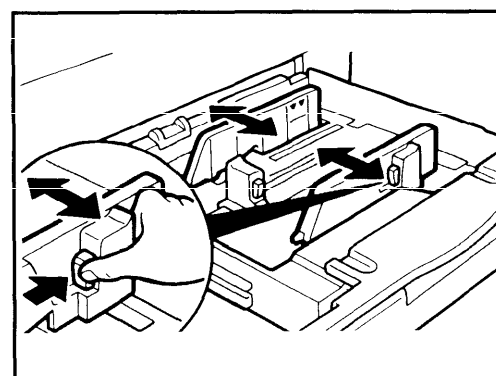


2. Remove all the copy paper.



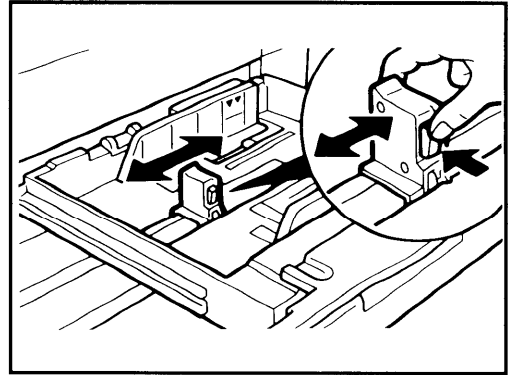
3. While pressing the green release lever on the front side guide, slide the front and rear guides to the paper size you want to use.

☐ Make sure that the release lever is locked in the correct position.

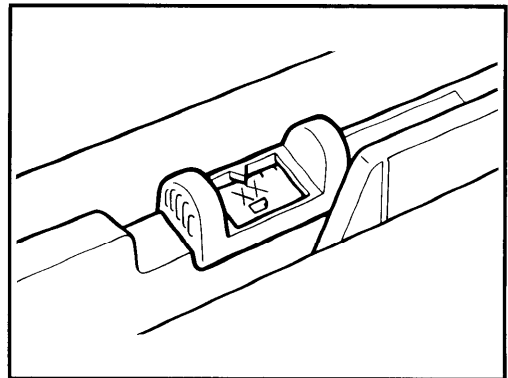


4. While pressing the left guide release lever, slide the left guide to the paper size you want to use.

- ❑ Make sure that the release lever is locked in the correct position.

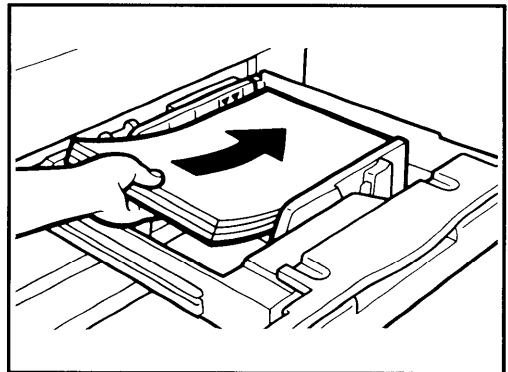


5. Select the paper size by adjusting the paper size selector on the rear side of the tray.



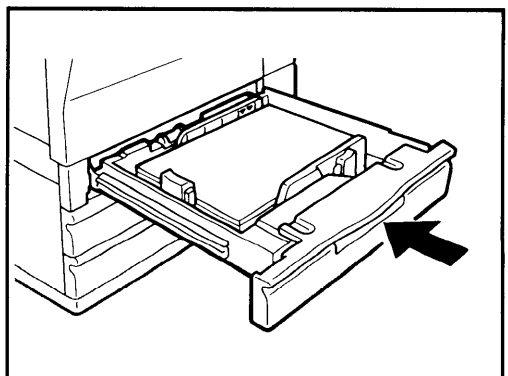
6. Load Paper.

- ❑ The paper stack must be flush with the right side of the tray.
- ❑ Do not stack paper over the limit mark.
- ❑ Make sure to read the notice on the package showing the front copy side. The copy side should be loaded down.



7. Push the tray in until it stops.

- ❑ Push the tray gently; otherwise the paper guides might move, possibly leading to paper being in the wrong position and to paper scewing.



ADDING TONER

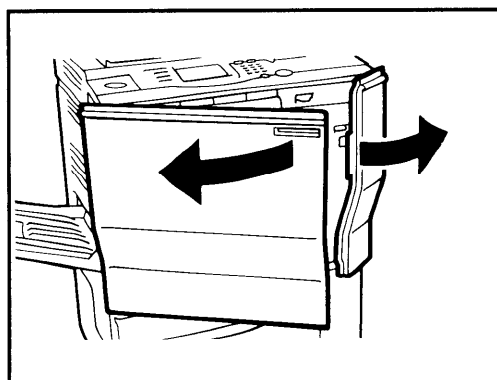
There are four kinds of toner (Cyan, Magenta, Yellow and Black). When the "Add Toner" message appears on the display, it is time to add toner.

Caution: Make sure to add the same color toner.

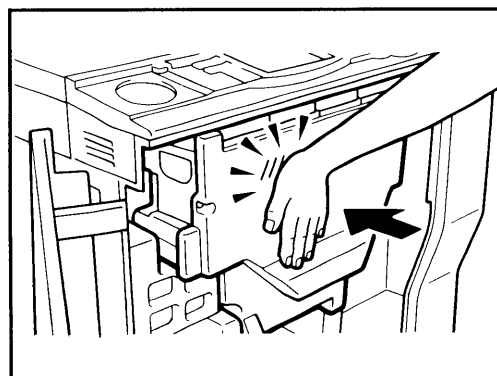
Caution: Add only one bottle of toner at a time.

WARNING: Do not incinerate the toner bottle. Toner dust may ignite when exposed to open flame.

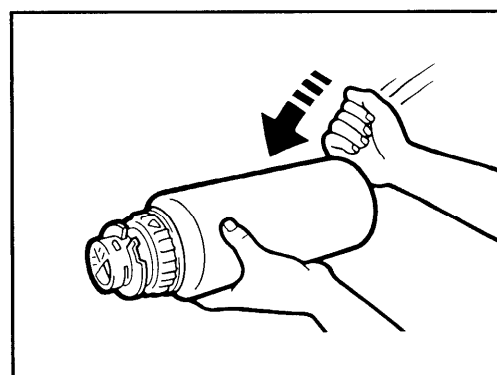
1. Open the front doors.



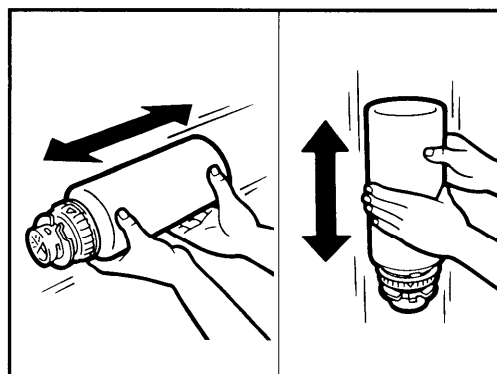
2. Push the toner unit. The unit will unlock and come out a little. Pull the unit until it stops.
3. Have ready a new toner bottle of the color indicated on the touch panel display.



4. Tap the new toner bottle to loosen the toner.

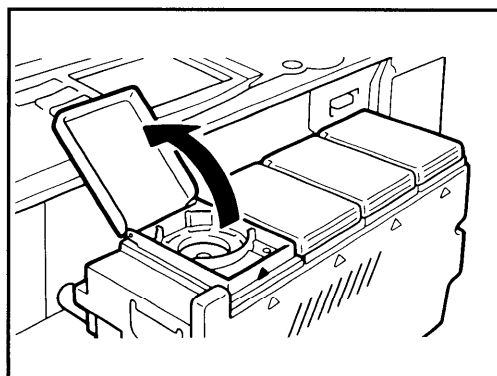


5. Shake the new toner bottle right and left, and up and down at least ten times each.

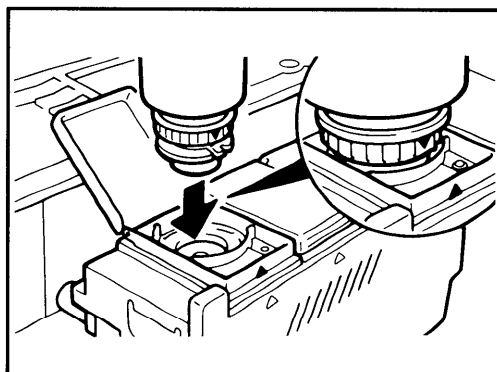


6. Check the color of the toner unit and open its cover.

- ☐ Do not loosen or tighten the cap of the toner bottle before setting the toner bottle in position.

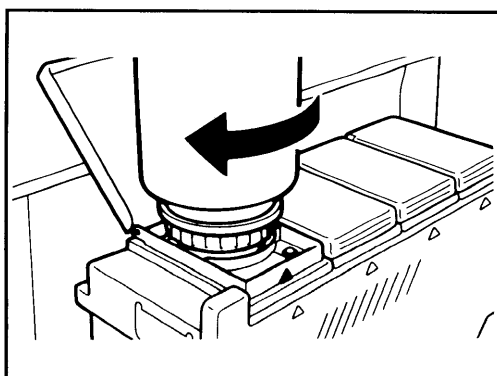


7. Align the arrows of the unit and the bottle. Press the toner bottle down until it sets in position.



8. Turn the toner bottle clockwise until it stops (about 90°). The toner will fall into the unit.

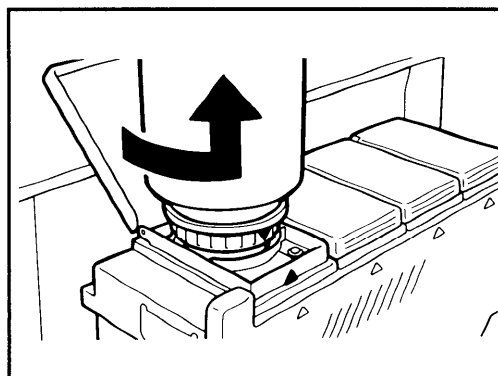
Caution: Do not tap the toner bottle. If you do, toner may scatter.



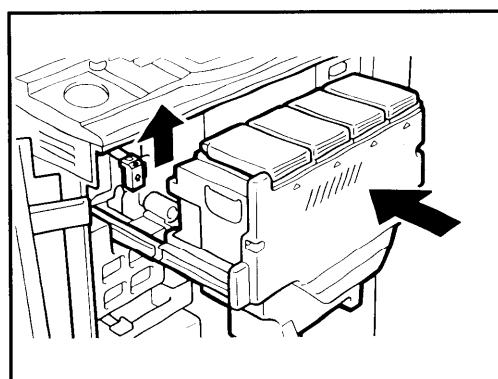
9. Check that the bottle is empty, then turn the bottle counterclockwise and remove it.

- ❑ If toner still remains in the bottle, remove the bottle once (steps 8 and 9), shake it again (steps 4 and 5), and reset the toner bottle again in position (steps 6 and 7).

WARNING: *Dispose of the empty toner bottle according to local regulations.*



10. While lifting the green lever, slowly push the unit back in until it locks.



11. Close the front doors.

CHAPTER 4

"BASIC OPERATION AND FUNCTIONS"

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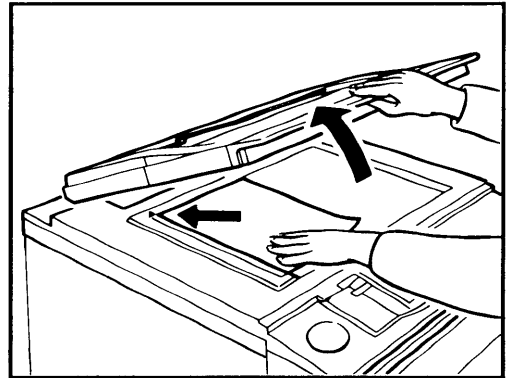
SETTING ORIGINALS	4-2
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SETTING ORIGINALS

Setting Originals On The Exposure Glass

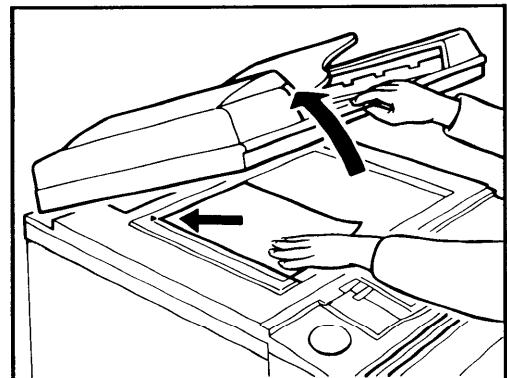
If your machine is equipped with the platen cover:

1. Lift the platen cover.
2. Set the original face down on the exposure glass. The original must be aligned with the rear left corner.
 - ☐ Before pressing the **Start** key, lower the platen cover.



If your machine is equipped with the dual job feeder:






















1. Lift the dual job feeder.
2. Set the original face down on the exposure glass. The original must be aligned to the rear left corner.
 - ☐ Before pressing the **Start** key, lower the dual job feeder.










Setting Originals In The Dual Job Feeder


Recommended Originals

The following types of originals can be used with this dual job feeder.

	Paper Weight	41 – 52 g/m ²	53 – 80	81 – 104	105 – 128
		11 – 13 lb	14 – 20	21 – 28	29 – 34
	Maximum number of originals to be set	50	50	30	25
A4/A3 version	A3 	*	●	○	*
	A4 	*	●	○	*
	A4 	*	●	○	*
	A5 	*	○	○	*
	B4 	*	●	○	*
	B5 	*	●	○	*
	B5 	*	●	○	*
	F (8" x 13") 	*	●	○	*
LT/DLT version	11" x 17" (DLT) 	*	●	○	*
	8 1/2" x 14" (LG) 	*	●	○	*
	8 1/2" x 11" (LT) 	*	●	○	*
	8 1/2" x 11" (LT) 	*	●	○	*
	5 1/2" x 8 1/2" (HLT) 	*	○	○	*
	5 1/2" x 8 1/2" (HLT) 	*	*	*	*
	8" x 13" (F) 	*	●	○	*
	8 1/2" x 13" (F4) 	*	●	○	*
	8" x 10 1/2" 	*	●	○	*
	8" x 10" 	*	●	○	*
	8" x 10" 	*	●	○	*
	10" x 14" 	*	●	○	*
	11" x 15" 	*	●	○	*





□ Available functions:

- :
 - Presetting copy jobs ( page 4-10)
 - Setting a stack of original
(Both 1-sided originals and 2-sided originals can be copied.  page 4-4)
 - Setting one original at a time ( page 4-6)
- :
 - Setting a stack of original
(Both 1-sided originals and 2-sided originals can be copied.  page 4-4)
 - Setting one original at a time ( page 4-6)
- *:
 - Setting a stack of original ( page 4-4)
 - Setting one original at a time
(Only 1-sided originals can be copied.  page 4-6)

□ User Tool Setting ( page 8-5): Select "Thin Paper mode" for originals less than 53g/m² (14 lb).

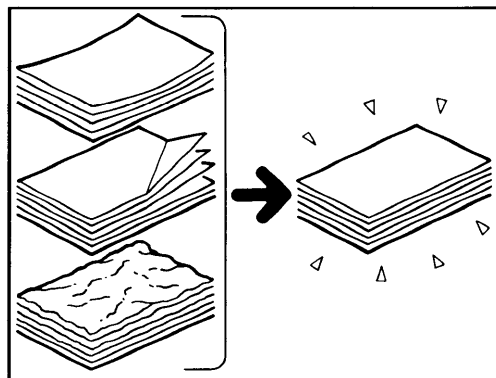
Non-recommended Originals

Caution: The following types of originals are not recommended for use with the dual job feeder. Please place them directly on the exposure glass. (see page 4-2)

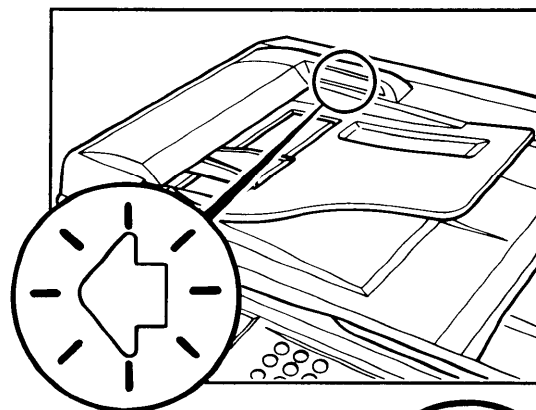
- ☐ Originals with a paper weight greater than 128 g/m² or 34 lb
- ☐ Originals larger than A3 , 11"x17" 
- ☐ Originals thinner than 47 g/m² or 11 lb
- ☐ Folded, curled, creased, torn, or damaged originals.
- ☐ Damp originals
- ☐ Mailing labels, or perforated originals
- ☐ OHP transparencies
- ☐ Originals smaller than A5  (A4/A3 machines), or 5 1/2"x8 1/2"  (LT/DLT machines)
- ☐ Non-standard sized paper
- ☐ Pasted originals
- ☐ Any coated paper (carbon, thermal paper, etc.)
- ☐ Bound, stapled, or clipped originals
- ☐ Paper with any kind of coating (such as carbon) on the back, or originals that are taped together.

Setting A Stack Of Original (ADF/ARDF mode)

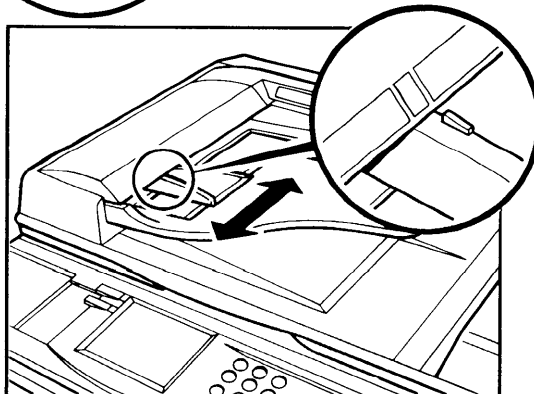
1. Correct any curl, fold, or crease in the originals before setting. Square the stack of originals.



2. Confirm that the **Insert Original** indicator is lit before setting.
3. Confirm that no previous originals remain on the exposure glass.

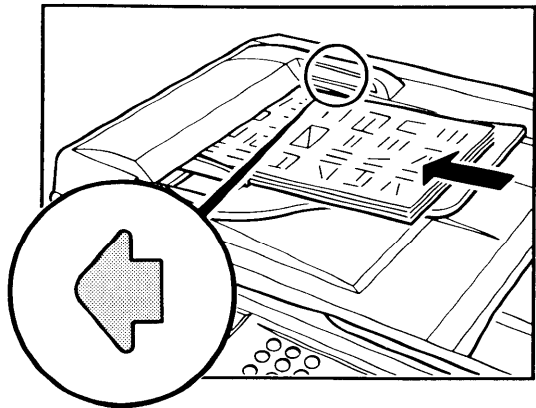


4. Adjust the original guide to the original size.

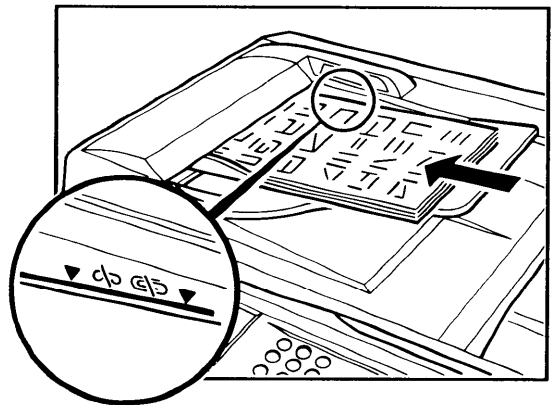


5. Set originals face up into the dual job feeder until the **Insert Original** indicator goes off.

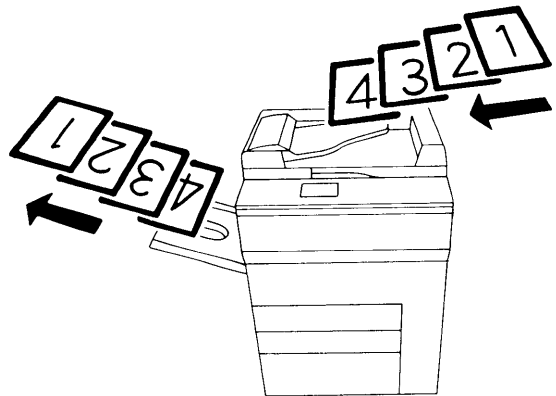
- ❑ The original guide must touch the front side of the originals.



- ❑ Do not stack originals above the limit mark.

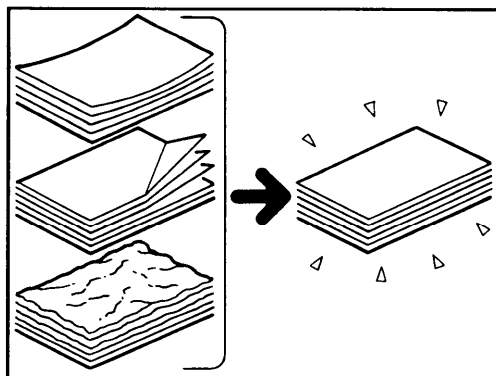


The bottom sheet of the original stack (last page) will be fed into the dual job feeder.

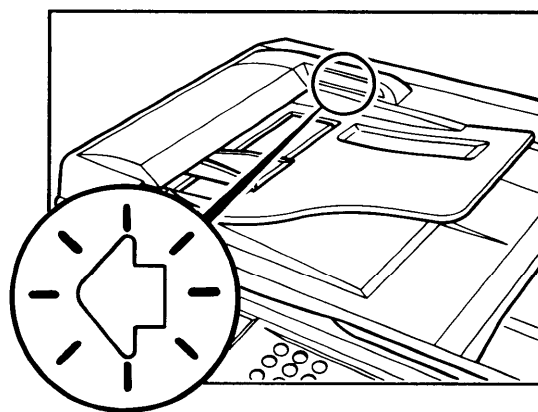


Setting One Original At A Time (SADF mode)

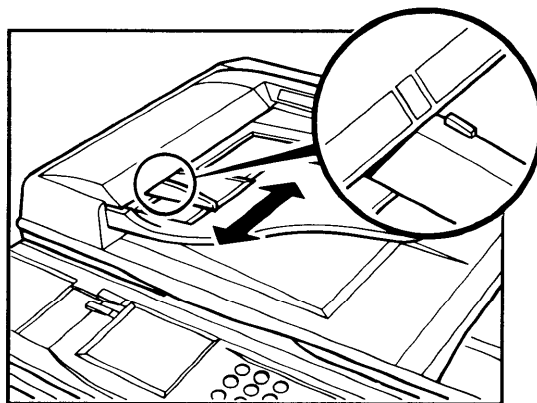
- 1 Correct any curl, fold, or crease in the originals before setting.



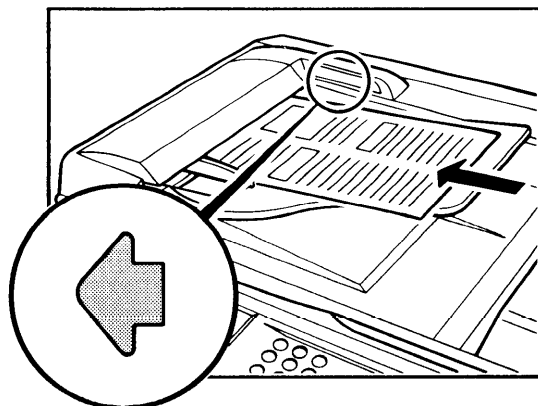
2. Confirm that the **Insert Original** indicator is lit before setting.
3. Confirm that no previous original remains on the exposure glass.



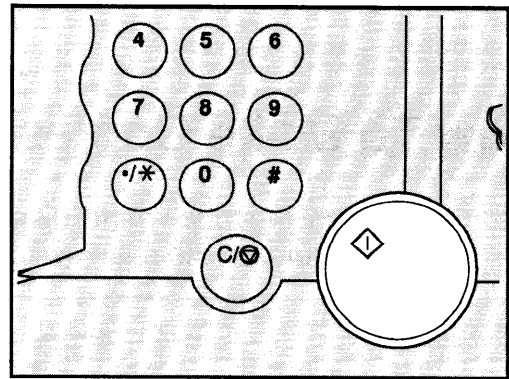
4. Adjust the original guides to the original size.



5. Set the original face up into the dual job feeder until the **Insert Original** indicator goes off.
 - ☐ Start with the last page of the originals.
 - ☐ The original guide must touch the front side of the original.

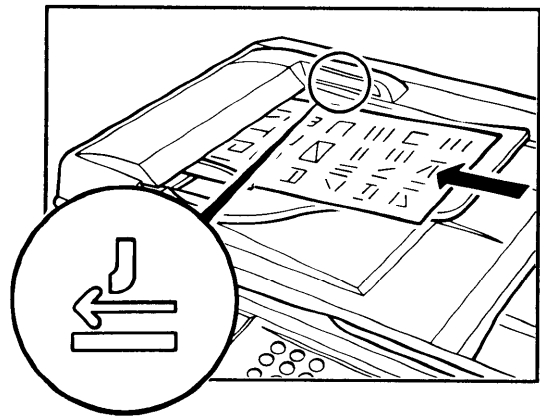


6. Press the **Start** key.



7. While the **Auto Feed** indicator is lit after an original is fed, set the next original. The original is automatically fed and copied.

- When the **Auto Feed** indicator lights, the dual job feeder is ready for another original. (You can change the time until the mode is cleared by the User Tool.
☞ page 8-3 "SADF Auto Reset".)

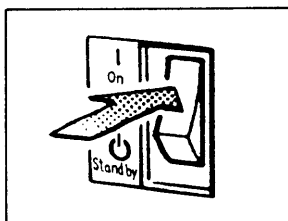


8. Repeat steps 5 and 7 until copying is completed.

COPYING

How To Make Copies

1. Confirm that the touch panel display is on. If not, turn on the main switch.



- ☐ If the touch panel display is off under the stand by (screen saver) condition (see page 4-13), press the **Clear Modes/Stand by** key.
- ☐ If your machine is in the User Code mode (see page 8-6), input your user code first and then press #.

2. Select the copy job settings.

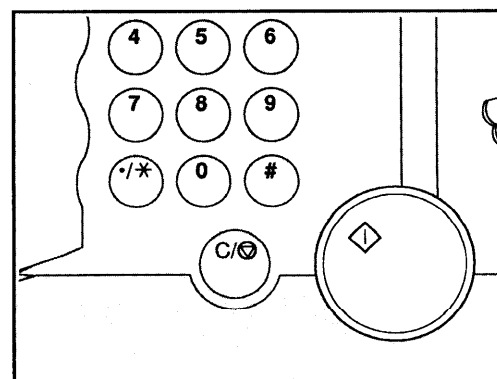
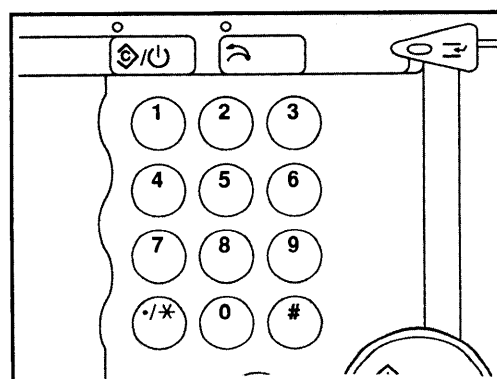
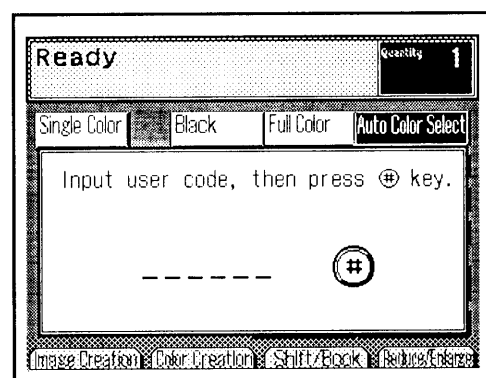
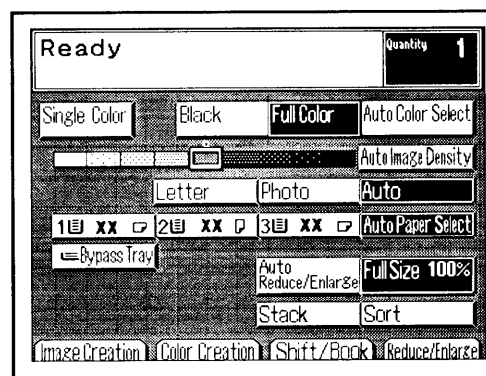
- ☐ To make copies with the same colors and size as the originals, see page 4-9. (Standard copy job settings.)
- ☐ To select advanced functions manually, see chapter 5.

3. Enter the number of copies required using the **Number** (0-9) keys.

4. Set the originals on the exposure glass or in the dual job feeder. (see page 4-2)

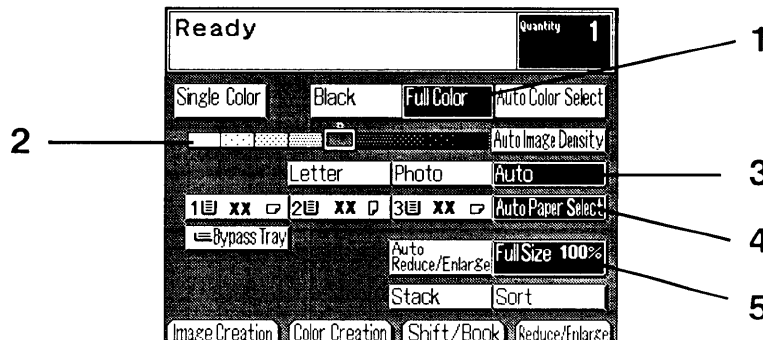
5. Press the **Start** key.

- ☐ If you press the **Start** key during the warm-up period (about 8 minutes, after the main switch is turned on), the **Start** key indicator will blink. Then the copier automatically starts copying after the warm-up period (Auto Start mode). The Start key blinks red and green in this mode.



Standard Copy Job Settings

If you want to make copies identical to the originals (same colors, same size), make sure that the standard modes listed below are selected.



1. Full Color mode

In this mode, copies are made with the same colors as the original. If you use originals with only black images, select the Black Copy mode.
(For details about color selection, see page 5-3.)

2. Manual Image Density mode (Image Density Adjustment)

There are 9 levels of image density. Level 4 is the standard image density.
(For details about image density adjustment, see page 5-4.)

☐ Auto Image Density mode cannot be selected when in Auto Color Select mode or Full Color mode.

3. Auto (Letter/Photo) mode

The copier automatically detects the letter parts and photo parts of an original. The letter parts are copied in the Letter mode, and the photo parts are copied in the Photo mode.
(For details about original image type selection, see page 5-5.)

4. Auto Paper Select mode

The copier selects a suitable size of copy paper based on the original size and the reproduction ratio. It is not necessary to select a paper tray manually.
(For details about paper selection, see page 5-6.)

☐ The copier cannot detect original size smaller than A5 or 5 1/2" x 8 1/2".

5. Full Size mode

The copier will make copies of the same size as the originals.
(For details about reduction and enlargement, see page 5-9.)

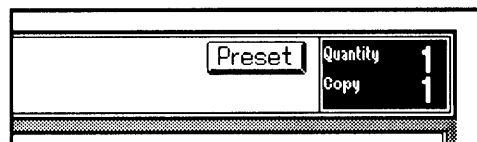
Presetting Copy Jobs During A Copy Run

You can set the copy settings for your next job (Preset mode).

This function can be used only when your machine is equipped with the optional dual job feeder.

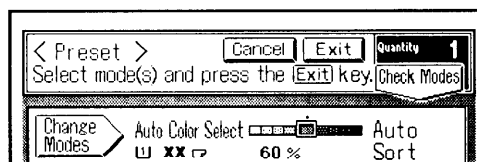
The copier will start the next copy job after the current job is completed.

1. Touch the **Preset** key on the touch panel display.



2. Select the copy job settings.

3. Touch the **Exit** key on the touch panel display.

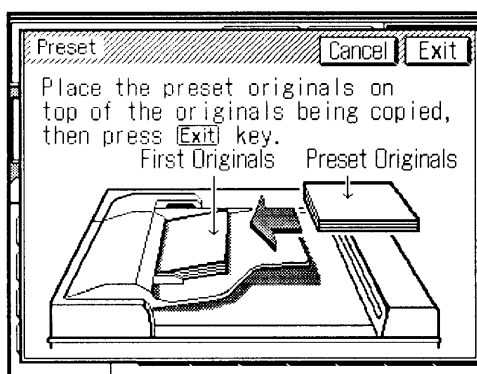


4. Set the originals for your next job on top of the originals being copied. Without forcing them, push them in completely.

- ☐ Do not insert the originals too strongly.

5. Touch the **Exit** key on the touch panel display.

- ☐ After the first job is finished, the next job will start automatically.



Changing / Canceling Preset Copy Jobs

To change or cancel the preset copy jobs, touch the **Preset** key on the touch panel display and follow the instructions displayed.

OTHER BASIC OPERATIONS

Checking And Changing The Selected Copy Jobs

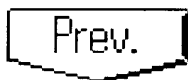


If you have selected modes on the operation screens, the **Check Modes** key and **Change Modes** key appears on the touch panel display.



If you touch the **Change Modes** key, you can change the following job settings:

- ☐ Color Selection
- ☐ Image Density Adjustment
- ☐ Photo/Letter Selection
- ☐ Paper Selection
- ☐ Sorting/Stacking



If you touch the **Check Modes** key, you can see at a glance all the modes you have selected. Touch the **Prev.** key to return to the display when the **Check Modes** key was pressed.

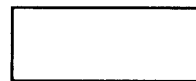
Finish Setting Data Or Selecting Modes



After you have finished setting data or selecting modes, touch the **Exit** key on the touch panel display.

Canceling A Selected Copy Job Setting

To cancel one of the job settings, touch the selected keys



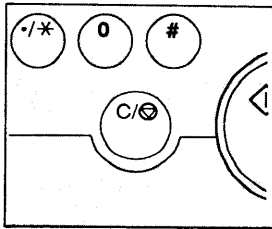
Selected key.
Touch to cancel.

Key not selected
Touch to select.



If the **Cancel** key appears on the touch panel display, touch it.

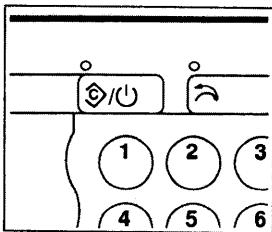
Clearing Data Entered By The Number Keys



To clear data you have just entered with the **Number** (0-9) keys, press the **Clear/Stop** key.

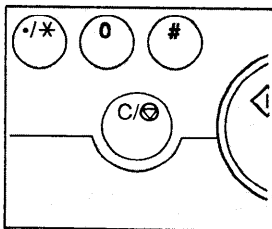
Then re-enter the desired number with the **Number** (0-9) keys.

Canceling All The Job Settings



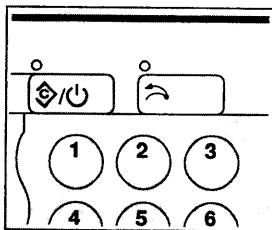
To cancel all the manually selected job settings, press the **Clear Modes/Stand by** key.

Stopping The Copier During A Copy Run



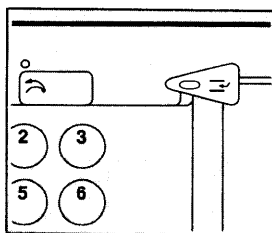
To stop the copier during a copy run, press the **Clear/Stop** key. The copier will finish the copy being made and stop. If you have placed the originals into the dual job feeder, press the **Clear/Stop** key again so that the original placed on the exposure glass will be fed out automatically.

Recalling The Previous Job Settings



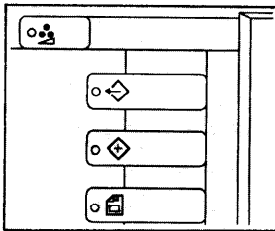
This copier will automatically store the previous copy job settings at the previous copy run. Press the **Memory Call** key. You can change the recalled job settings.

Interrupting One Job To Do Another



Press to interrupt a multicopy run to make urgently needed copies (Interrupt mode). The interrupted copy job settings are stored in the copier's memory. After interrupt copying is completed, press this key again to recall the previous job settings.

Saving Job Settings For Future Use



You can store up to 5 frequently used copy job settings in machine memory and recall them for future use (User Program mode).

When storing copy job settings into machine memory, make sure to select the copy jobs settings before pressing the **Program** key.

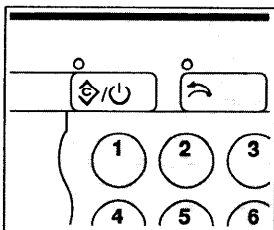
Recall program

Store program

The following job settings cannot be stored in memory:

- ☐ Color Editing (Area Editing)
- ☐ Projector

Turning The Touch Panel Display OFF/ON

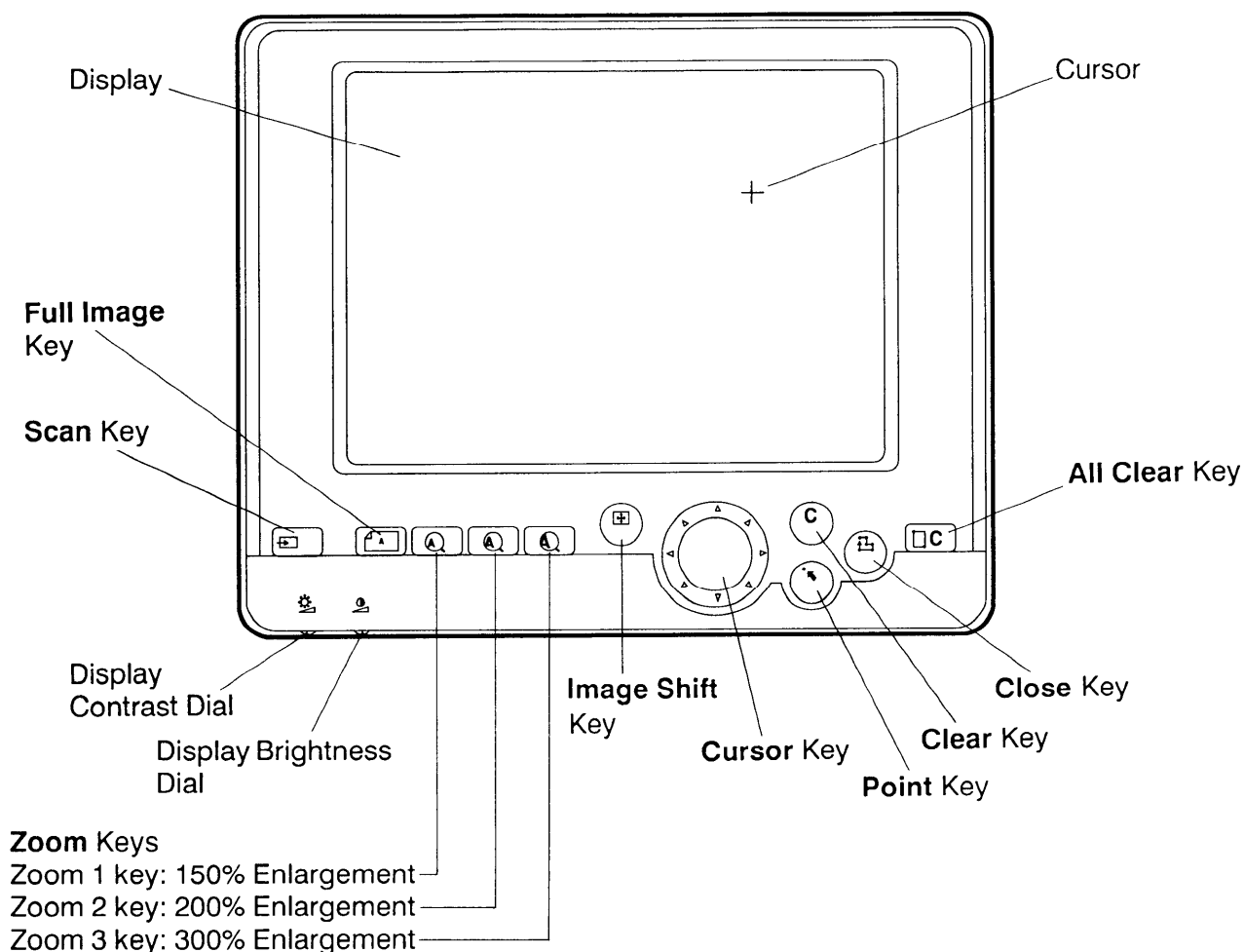


You can turn the touch panel display off to save energy. If you want to do this manually, press the **Clear Modes/Stand by** key more than 2 seconds. The touch panel display turns off and the indicator for this key will be on.

Press the **Clear Modes/Stand by** key again if you want to use the machine. The touch panel display will be turned on.

- ☐ User Tool Setting "Screen Saver" (☞ page 8-3):
When the machine does not detect anyone operating it for the selected time, the touch panel display turns off automatically. This time can be set from 1 second to 900 seconds, or the function can be turned off.

DISPLAY EDITOR BASIC OPERATION



4

BASIC OPERATION AND FUNCTIONS

Explanation for each key:

Key	Function
Scan key	Press to scan the image.
Cursor key	Press to move the cursor to up and down, left and right. After pressing the Image shift key, you can also shift the image up and down, left and right by pressing this key.
Zoom keys	Press to zoom in the image. (1: 150%, 2: 200%, 3: 300%)
Full Size key	Press to see the full image (the size of the exposure glass).
Image Shift key	Press to shift the image up and down, left and right.
Point key	Press to mark a point.
Close key	Press to close an area.
Clear key	Press to cancel the previously marked point before pressing the Close key.
All Clear key	Press to cancel all specified dimensions or areas.

Scanning In The Original Image

To scan in the original image, place the original on the exposure glass and press the **Scan** key. The entire image will be shown on the display editor.

Cursor Moving

To move the cursor around, press the **Cursor** key in the required direction.

Zoom In/Out

To zoom in on a part of the image, move the cursor to the area you want to zoom in on and press the required **Zoom In** key. That part of the image will be enlarged 150%/200%/300%. To see the entire image again (100%), press the **Full Image** key.

Image Shifting

When the display is zoomed in, you can scroll the display around. Press the **Image Shift** key and select the shift direction with the **Cursor** key.

Marking Points (Size Magnification, Scan Color, etc.)

Move the cursor to the desired place and mark a point by pressing the **Point** key.

Designating Areas (Area Editing)

☞ page 7-10

Canceling The Previously Marked Point

To cancel the previously marked point (before pressing the **Close** key), press the **Clear** key.

Canceling All Specified Dimensions Or Areas

To cancel the all the previously specified dimensions or areas, press the **All Clear** key.

CHAPTER 5

"ADVANCED FUNCTIONS"

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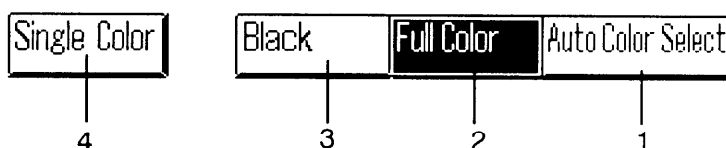
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COLOR SELECTION

Color Samples:  page 2-2



☐ User Tool Setting (page 8-4):

Normally the copier uses 4 color toners (Yellow, Magenta, Cyan, and Black). You can change this setting so that only 3 colors of toner are used (Yellow, Magenta, and Cyan).

Auto Color Select (Key = 1)

The copier automatically detects whether the original has color parts or not. Originals with only black images will be copied in the Black Copy mode and originals with some color areas will be copied in the Full Color mode.

- ☐ The copier may detect some black and white screen images (such as from newspapers) as a full color original. If copying from a newspaper original, select Black Copy (key = 3)
- ☐ If you make one copy set of a black original using the dual job feeder, we recommend you select Black Copy (key=3). If you choose Auto Color Select mode, the copier will reset the color selection for every original page, taking a long time to complete the job.
- ☐ If you select the Auto Color Select mode, Letter mode will be selected automatically.

Full Color Copy (Key = 2)

This function makes copies in full color.

Black Copy (Key = 3)

This function makes copies in black.

Single Color (Key = 4)

This function makes copies in single colors. The colors you can choose for single color copying are as follows. Touch the color keys on the touch panel display, or press the keys in the color circle. (The white and black keys cannot be used.)




- ☐ 8 Standard Single Colors:
Yellow, Orange, Red, Magenta, Blue, Cyan, Green, Light-green.
- ☐ 3 User Colors:
Up to 3 colors can be manually mixed and stored in memory. ("User Color"  Page 6-6)
- ☐ 1 Scan Color
You can scan in a color from an original. ("Scanning in a color"  Page 6-6)

IMAGE DENSITY ADJUSTMENT

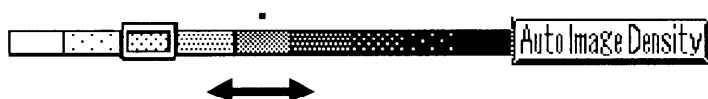
Samples:  page 2-3



- ☐ User Tool Setting ( page 8-4):
You can adjust the auto image density level lighter or darker.

There are three ways of setting the image density to match the type and quality of the original.

Manual Image Density selection



There are nine image density levels. Level 4 is standard image density
To get a darker image, touch the right keys. To get a lighter image, touch the left keys.

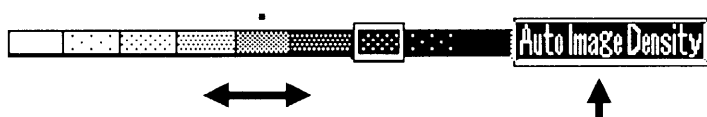
Auto Image Density



- ☐ This mode is available when Black Copy mode or Single Color mode is selected.


The copier automatically controls the image density according to the original background density.

Combined Auto & Manual Image Density Selection




This setting is effective when adjusting the copy image density to keep the background from appearing.

ORIGINAL IMAGE TYPE (PHOTO/LETTER) SELECTION



Samples:  page 2-3



- ☐ User Tool Setting ( Page 8-4):
To improve the readability of black lettering in colored areas, select "UCR Adjustment".
- ☐ If you select Auto Color Select mode, Letter mode will be selected automatically. You can change this to Photo mode or Auto (Letter/Photo) mode to reproduce the original's photo part well. However, please note that if Auto Color Select mode and Auto Letter/Photo mode are selected together, black parts on the black and white original may be copied lighter.

Auto (Letter/Photo) mode (Key = 1)

This mode automatically detects letter parts and photo parts of an original. The letter parts are copied in the Letter mode, and the photo parts are copied in the Photo mode.

- ☐ Moire patterns may appear on the screened bold letters or screened areas of the copy. To lessen this effect, select "Soft" for the image sharpness on the image adjustment function. ( page 6-2.)
- ☐ With some types of originals, the Auto (Letter/Photo) mode might not be able to recognize the letter parts and photo parts correctly and as a result the copy might not be reproduced well (= image separation error). In such cases, a better copy may be reproduced by selecting the Letter mode or Photo mode. If you select the Letter mode, the background density of the copy may become lighter than the original image. If so, darken the background density ( page 6-2, "Background Density Control").
This may occur, especially under the following conditions,
 - Letters/Lines that have low density or have colored/screened background.
 - When making enlarged copies (eg. 200%).
 - Screened Letters

- ☐ Border parts between letters and photo or high contrast photo may be copied with an emphasized outline.
**Photo: Photo means not only photo pictures but also screened letter and solid areas.*

Photo mode (Key = 2)

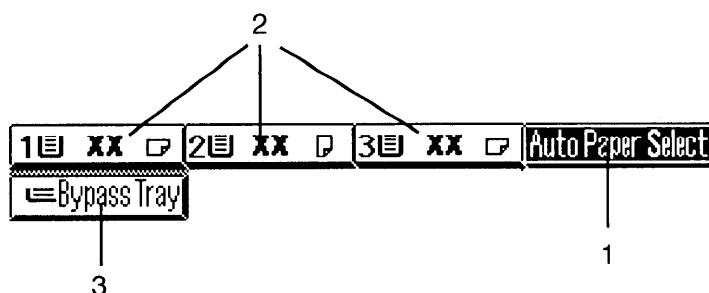
Delicate tones of color photographs and pictures can be reproduced. Use this function when copying photographs and pictures.

Letter mode (Key = 3)

This mode is suitable for copying originals consisting of characters, line diagrams, and letters, but without photographs.

- ☐ If a photograph type of original is copied in this mode, the photograph parts will not be reproduced as well as they could.

COPY PAPER SELECTION

Illustrations:  page 2-4**Auto Paper Selection** (Key = 1)

The copier selects a suitable size of copy paper based on the original size and the reproduction ratio. It is not necessary to select a paper tray manually.

- ☐ Originals which are of a nonstandard size, or smaller than A5 or 5 1/2" x 8 1/2" size, cannot be detected. In such cases, select the paper size manually.

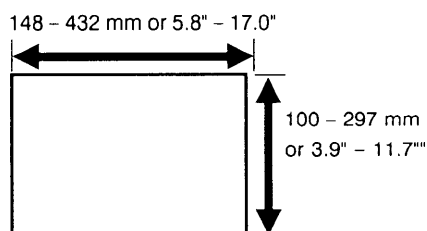
Manual Paper Selection (Keys = 2)

You can select the copy paper manually by touching one of the paper tray keys.

By-pass Feed Selection (Key = 3)






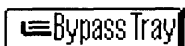

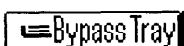

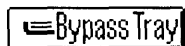

In addition to feeding paper from paper trays, copy paper can be fed from the by-pass feed tray.

- ☐ Available paper size:



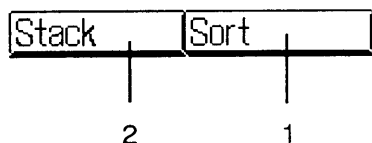
- ☐ Available paper thickness: 64 ~ 157g/m² or 17 ~ 42 lb
- ☐ Check which keys should be selected according the type of copy paper (see next page).

☐ Check the type of copy paper and touch the keys as shown below.

Key	Usage	Note
 only	Standard paper	<p>☐ The machine will detect paper of the following size and direction as standard paper.</p> <ul style="list-style-type: none"> • A4/A3 version <ul style="list-style-type: none">  : A3, B4, A4, B5, A5, B6, A6  : A4, B5, A5, B6, 8 1/2" x 11" • LT/DLT version <ul style="list-style-type: none">  : 11" x 17"(DLT), 10" x 14", 8 1/2" x 11"(LT), 8" x 13(F), 5 1/2" x 8 1/2"(HLT)  : 8 1/2" x 11"(LT), 5 1/2" x 8 1/2"(HLT)
 	Non-standard paper	<p>☐ If the machine cannot detect the paper size and direction, the copy image may not be correctly positioned on the copy paper. Therefore, input the paper size and direction data by using the user tool to make of the correct size.</p> <p>"User Tool - Set Bypass Paper Size" ☞ page 8-3.</p>
 	Thick paper Adhesive labels	<p>☐ Thick Paper: 104 – 157g/m² or 28 – 42 lb.</p> <p>☐ Make sure to load adhesive labels one sheet at a time</p>
 	OHP transparencies	<p>☐ Check which side should have the copy. (☞ page 3-7)</p> <p>☐ Do not stack transparencies on the copy tray. Whenever a transparency is delivered to the copy tray, you should remove it immediately.</p> <p>☐ OHP transparencies should be fanned to get the air between the sheets before loading them.</p>

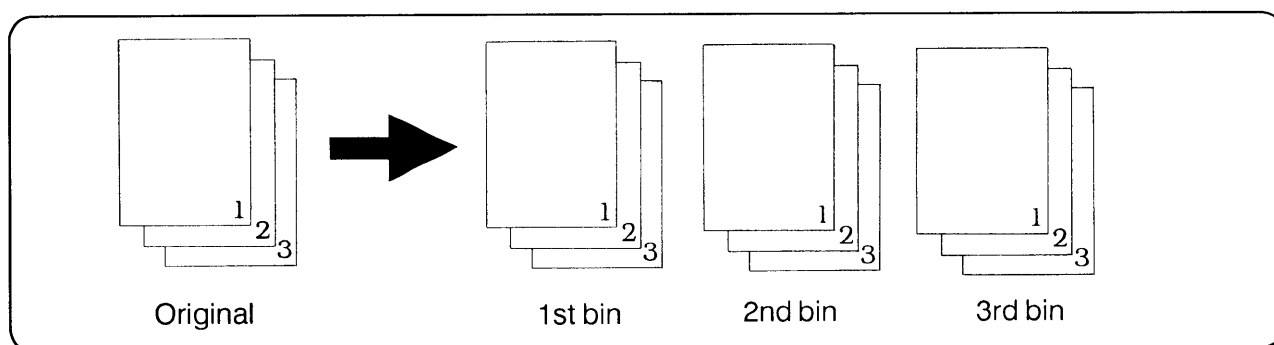
(➤)SETTING PAPER ON THE BY-PASS FEED TRAY ☞ page 3-6)

SORTING/STACKING



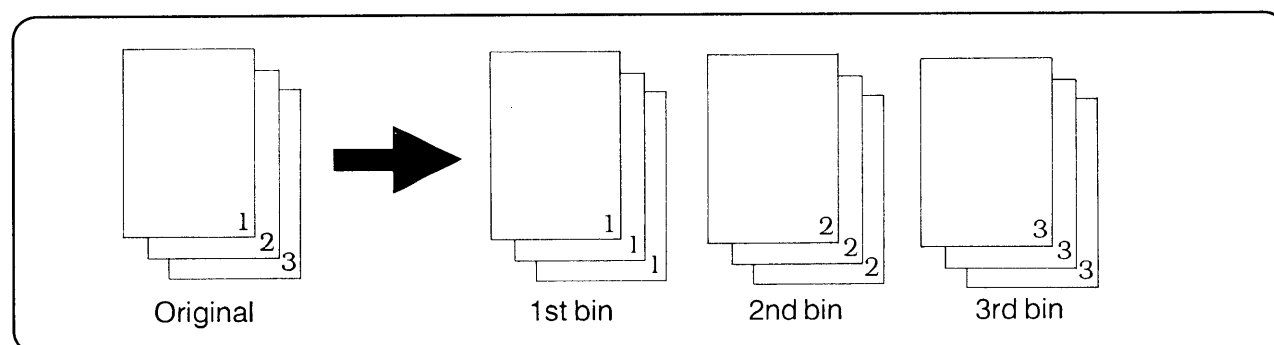
- ☐ Available paper thickness for sorting/stacking: 52 – 90 g/m² or 14 – 24 lb
- ☐ Available paper size: Maximum: A3 or 11" x 17" Minimum: A5 or 5 1/2" x 8 1/2"
- ☐ User Tool Setting (☞ page 8-5):
You can change the settings so that the sorting/stacking modes cannot be selected when in full color copying mode.

Sorting (Key = 1)



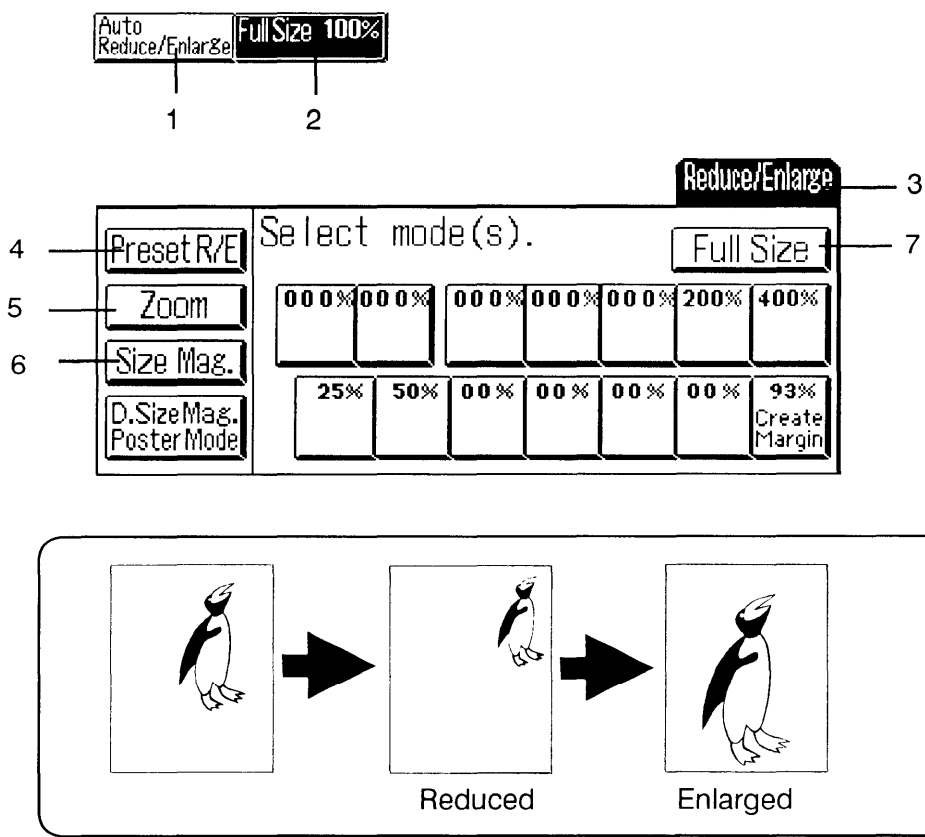
One copy of each original is delivered to each bin. (Copies are collated into sets.)

Stacking (Key = 2)



All copies of the same original are delivered to the same bin. (Copies are grouped together.)

STANDARD REDUCTION AND ENLARGEMENT



Auto Reduction/Enlargement (Key = 1)

The copier automatically selects the proper reproduction ratio for the selected modes and original size.

Full Size Copying (Key = 2, or Keys = 3 + 7)

To copy the image the same size as the original, select this function.

Fixed Reduction/Enlargement % (Keys = 3 + 4)

You can select one of 14 preset ratios. 12 of them are fixed (7 reduction ratios and 5 enlargement ratios).

- ☐ User Tool Setting (page 8-5):
2 of the preset ratios can be preset by the user.

Zoom (Keys = 3+5 on page 5-9)

The reproduction ratio can be changed from 25% to 400% in 1% steps. There are two ways to change ratios.

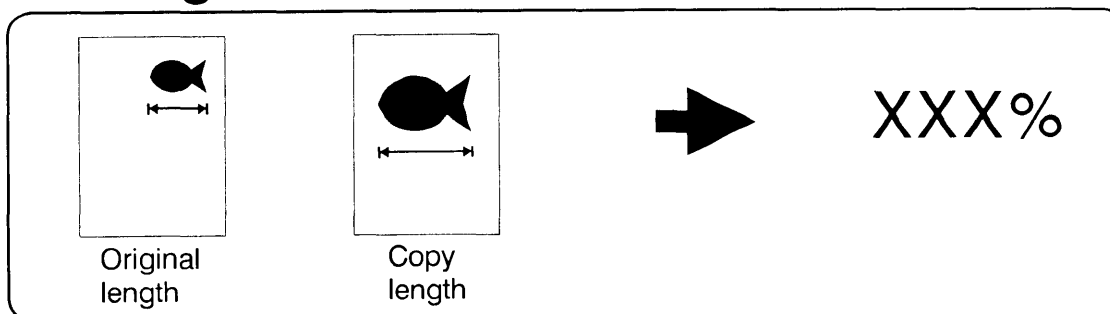
1. + and – keys

Adjust the reproduction ratio by using the + and – keys.

2. Number keys

Touch the **Number Keys** key and enter the desired reproduction ratio by using the **Number** (0-9) keys and **#** key.

Size Magnification (Keys = 3+6 on page 5-9)



The suitable reproduction ratio will be automatically selected when you enter the lengths of the original and the copy image you want.

1. Number keys

Enter the lengths of the original image and the desired copy image with the **Number** (0-9) keys and the **#** key.

2. Editor input

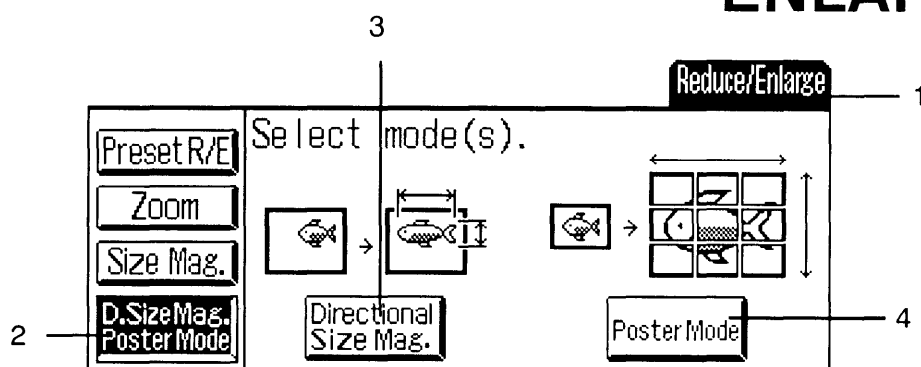
The optional display editor is required for editor input.

This function allows you to specify the lengths of the original image and the copy image with the optional display.

Touch the **Editor Input** key. **Scan** the original image in the display editor and specify the lengths of the original image and desired copy image by marking points with the **Point** key.

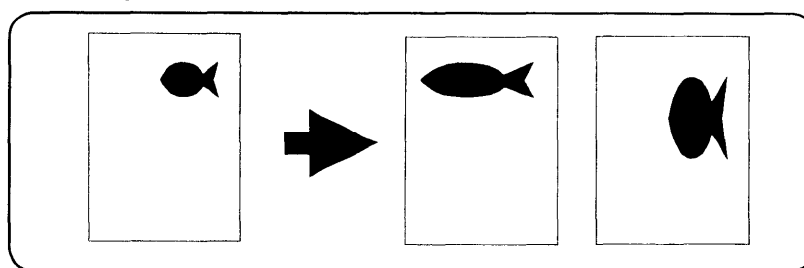
□ For details about display editor operation, see page 4-14.

SPECIAL REDUCTION AND ENLARGEMENT



Directional (Size) Magnification (Keys = 1+2+3)

Sample: page 2-5



You can select independent ratios for vertical and horizontal directions.

1. % Input

Touch the **% Input** key and enter the reproduction ratio for both the vertical and horizontal direction by using the **Number** (0-9) keys and the **#** key.

2. Size Magnification

The machine automatically calculates the reproduction ratio.

Touch the **Size Input** key and enter the vertical and horizontal lengths of original image and copy image by using the **Number** (0-9) keys and the **#** key.

3. Editor Input

The optional display editor is required for editor input.

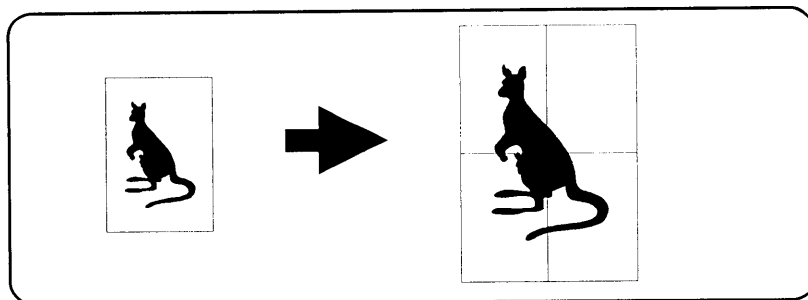
This function allows you to specify the length of original image and copy image by using the optional display editor.

Touch **Editor Input** key. **Scan** the original image in the display editor and specify the lengths of the original image and desired copy image for both the vertical and horizontal directions by marking points with the **Point** key.

□ For details about display editor operation, see page 4-14.

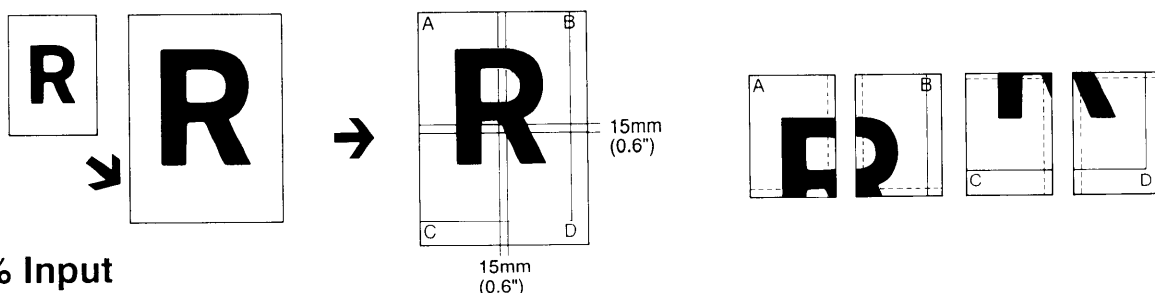
Poster Making (Keys = 1+2+4 on page 5-11)

Sample:  page 2-5



You can enlarge the complete image onto several sheets.

- ☐ In this mode, the copies are delivered with margins around the copy image (about 15 mm or 0.6"). If you want to paste the sheets to make a poster (one large sheet), make sure to cut the margins out.



1. % Input

If you enter the desired enlargement ratio, the machine automatically calculates the necessary number of copy pages.

Touch the **% Input** key and enter the enlargement ratio in the **Equal %** area with the **Number** (0-9) keys and the **#** key. If the enlargement ratio for the horizontal and vertical direction differ, touch the **H.** (Horizontal) key or **V.** (Vertical) key and enter the the enlargement ratio for each direction.

2. Page Input

If you enter the desired number of pages, the machine automatically calculates the suitable enlargement ratio for copying.

Touch the **Page Input** key and enter the desired number of pages for each direction in the **Equal Pages** area with the **Number** (0-9) and **#**key. If the number of pages for each direction differs, touch **H.** (Horizontal) key or **V.** (Vertical) key and enter the number of pages for each direction.

- ☐ If you input number of pages that will enlarge the original image more than 400%, blank sheets will be fed out.

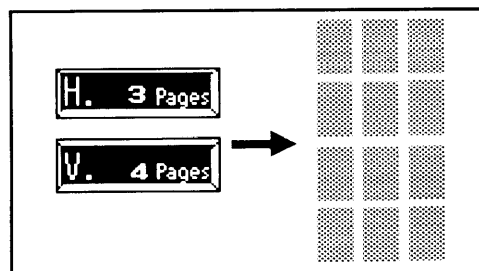
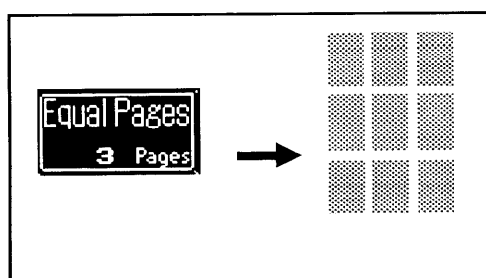
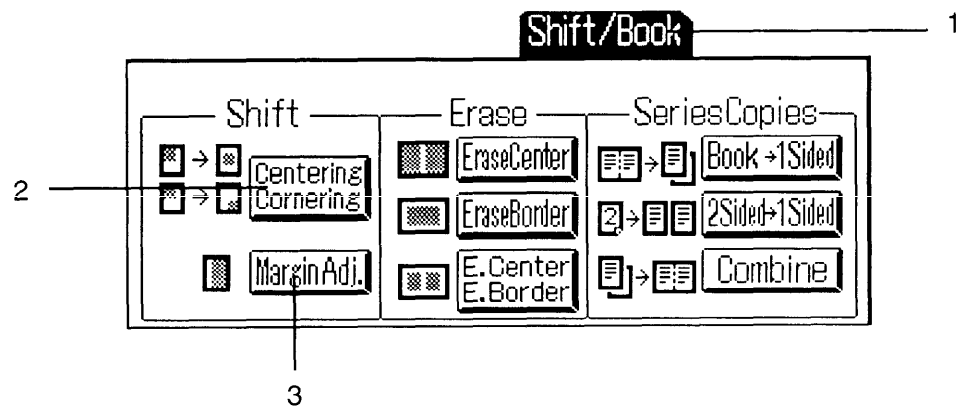
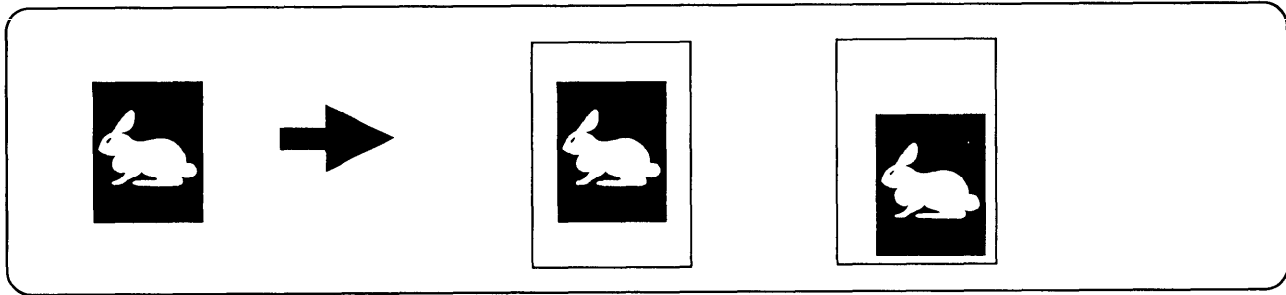


IMAGE SHIFTING



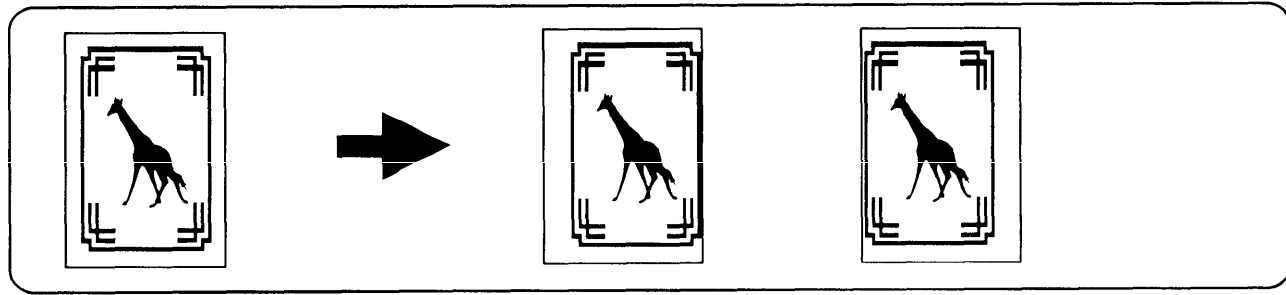
Centering/Cornering (Keys = 1+2)



You can shift the image around or to the center. This is convenient when the copy paper is larger than the original.

- ☐ Original size smaller than A5 or 5 1/2" x 8 1/2" cannot be detected by this machine. In such case, use the optional display editor and specify the area (Area Editing) to be centered. For details, see chapter 7.
- ☐ Use this function only when the original size is smaller than the copy paper size.
If the original size or the copy image size is larger than the copy paper size, the copied position might incorrect or the original image might be corrupt.

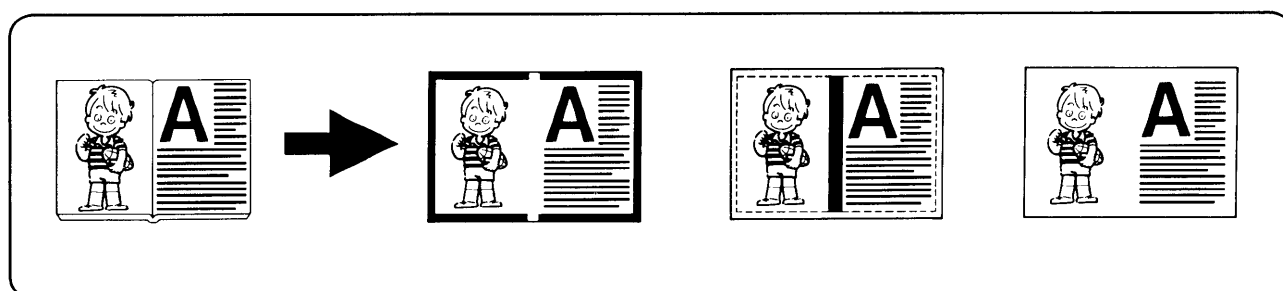
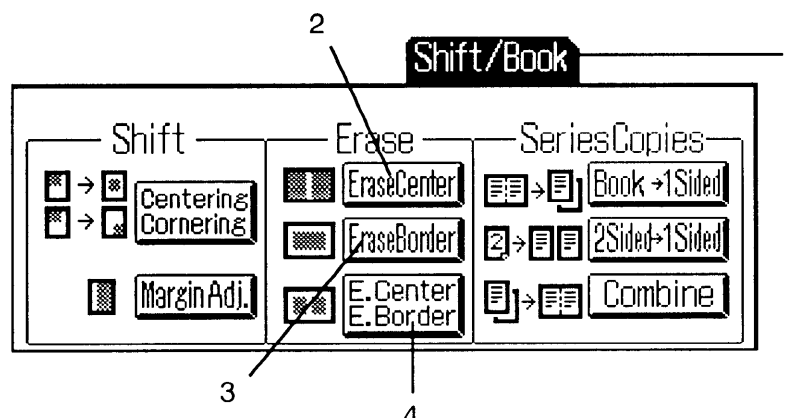
Margin Adjustment (Keys = 1+3)



You can shift the image either left or right to make a binding margin.

- ☐ Maximum margin width:
 - A4/A3 version: 0 - 20 mm in 1 mm steps
 - LT/DLT version: 0 - 0.8" in 0.1" steps

ERASING CENTER/BORDER



The following functions are useful when copying a book original.

Erase Center (Keys = 1+2)

This function erases the center of the original image.

- ☐ Width of the center margin to be erased:
 - A4/A3 version: 3 - 50 mm in 1 mm steps
 - Lt/DLT version: 0.1" - 2.0" in 0.1" steps

Erase Border (Keys = 1+3)

This function erases all four sides of the original image.

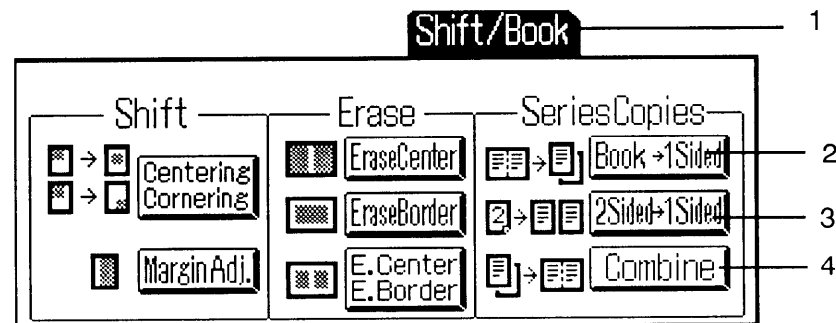
- ☐ Width of the border margin to be erased:
 - A4/A3 version: 3 - 50 mm in 1 mm steps
 - LT/DLT version: 0.1" - 2.0" in 0.1" steps

Erase Center And Border (Keys = 1+4)

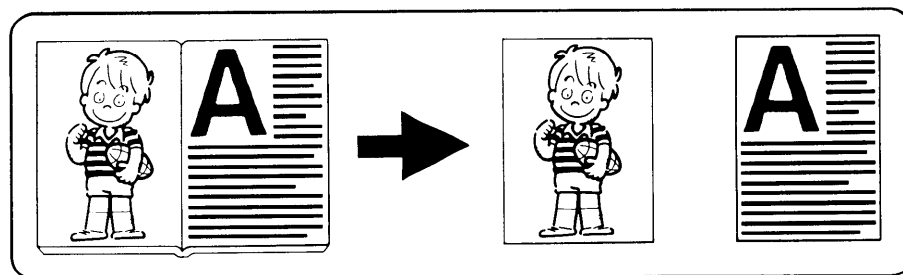
This function erases all four sides and the center of the original image.

- ☐ Width of the center and border margin to be erased:
 - A4/A3 version: 3 - 50 mm in 1 mm steps
 - LT/DLT version: 0.1" - 2.0" in 0.1" steps

SERIES COPYING



Book → 1 Sided (Keys = 1+2) (From book original to two 1-sided copies)



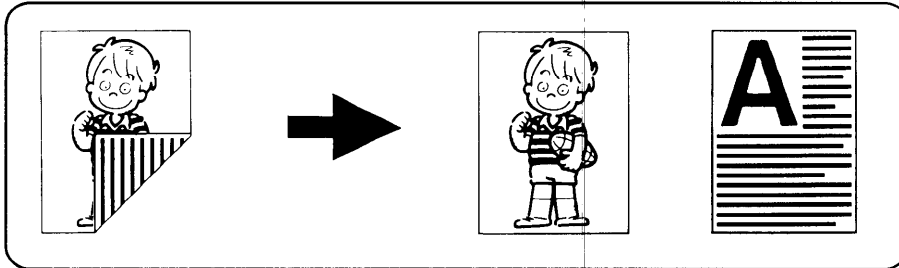
This function makes 1-sided copies from two facing pages of bound (book) originals.

- The center of an original is determined according to the selected copy paper and reproduction ratio. Make sure to select copy paper and reproduction ratio suitable to the original.

2 Sided → 1 Sided (Keys = 1+3 on page 5-15)

(From 2-sided original to two 1-sided copy)

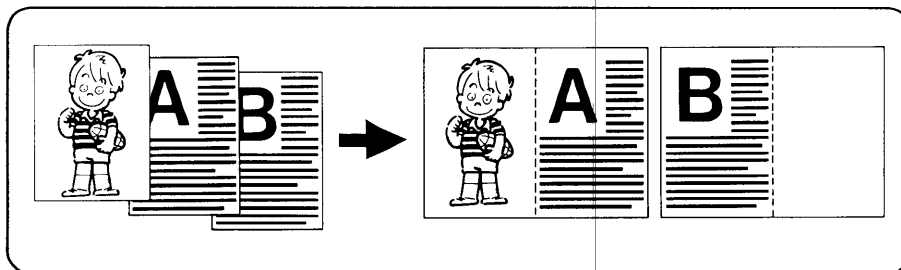
This function is available only when your machine is equipped with the dual job feeder.



This function makes 1-sided copies from 2-sided originals.

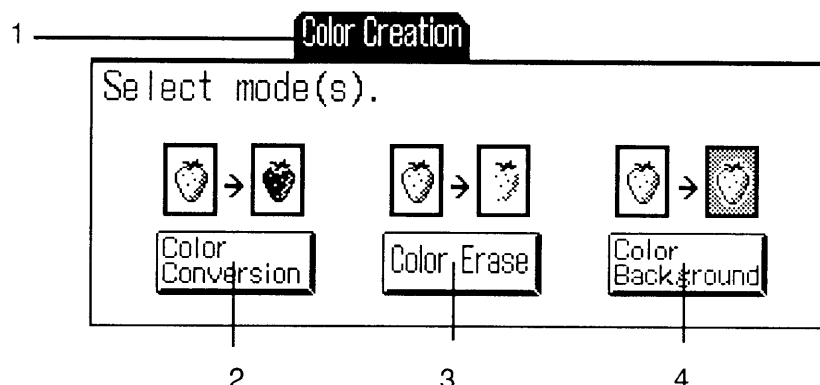
Combine Two Originals (Keys = 1+4 on page 5-15)

This function is available only when your machine is equipped with the dual job feeder.



This function automatically combines two 1-sided originals on one copy.


COLOR CREATION



Color Conversion (Keys = 1+2)

Color Sample:  page 2-7


This function converts a selected color of an original into a different color on the copy. Up to 4 colors can be converted at one time.

- ☐ Colors that can be converted:
Yellow, Red, Magenta, Blue, Cyan, Green, White, and Black.
Closely related colors will be also converted. For example, light green may be converted when you convert green.
- ☐ Colors that can be used after conversion:
Yellow, Orange, Red, Magenta, Blue, Cyan, Green, Light-green, White, Black, Scan Color, and User Colors.
(Only one scan color can be selected at one time.)
- ☐ User Tool Setting ( page 8-4):
The function can be made more or less sensitive to the color to convert. It can be adjusted within 5 levels ("Narrow" to "Wide").
For example, suppose red is converted to a scan color, selecting "Narrow" will result in only red being converted, and selecting "Wide" will result in other colors close to red being converted.

Color Erase (Keys = 1+3 on page 5-17)

Color Sample:  page 2-7

This function erases a selected color from the original image. Up to 4 colors can be erased.

- ☐ Colors that can be erased:
Yellow Red, Magenta, Blue, Cyan, Green, Black, and Scan Color.
- ☐ User Tool Setting ( page 8-4):
The function can be made more or less sensitive to the color to erase. It can be adjusted within 5 levels ("Narrow" to "Wide").
For example, suppose red is erased, selecting "Narrow" will result in only red being erased, and selecting "Wide" will result in other colors close to red being erased.

Color Background (Keys = 1+4 on page 5-17)

Color Sample:  page 2-7

This function makes copies with a selected color background. This mode is suitable for letter, line originals.


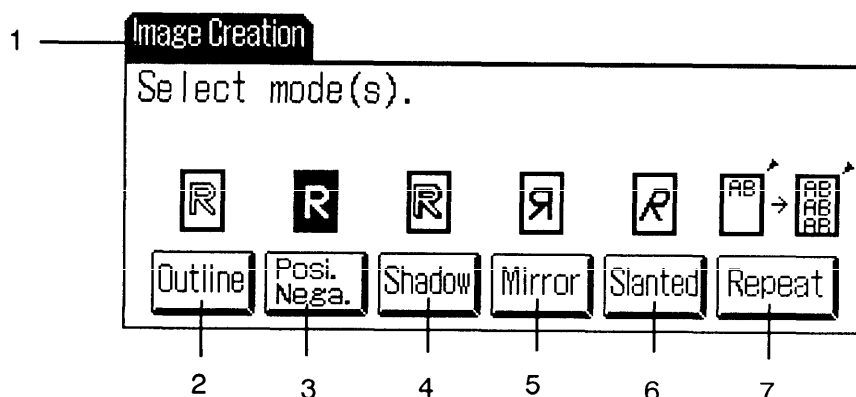
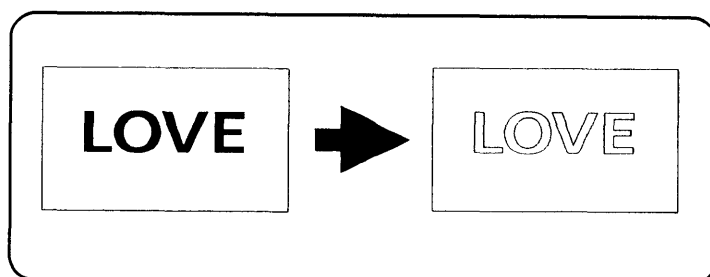
- ☐ Colors that can be selected for background:
Yellow, Orange, Red, Magenta, Blue, Cyan, Green, Light-green, Black, Scan Color, User Colors.
- ☐ In this mode, color tone of photo/picture originals is changed due to the color on the background.
- ☐ User Tool Setting ( page 8-4):
The color background density can be adjusted lighter or darker over 5 levels.

IMAGE CREATION



Outline Image (Keys = 1+2)



This function copies only the outline of the image.

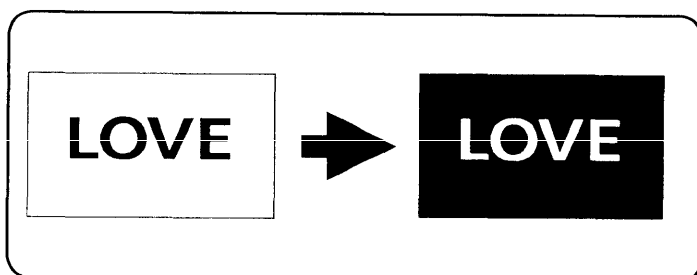
☐ The outline thickness can be selected:

- A4/A3 version: 0.25/0.5/0.75 mm
- LT/DLT version: 0.01"/0.02"/0.03"

☐ In the Photo mode, the Outline Image mode might not function well. In such case, select Letter mode or Auto (Letter/Photo) mode.

Positive/Negative Image (Keys = 1+3)

Color Photo Image Sample: Page 2-8



This function copies the original image in complementary colors. If you use a black and white original, black and white areas of the original are reversed.

Shadow Image (Keys = 1+4 on page 5-19)

Color Sample:  Page 2-8

LOVE ➔ LOVE LOVE

Block Shadow

Offset Shadow

This function adds a shadow around the edges of copy image elements.

☐ You can select offset shadow or block shadow.

☐ The width of shadow can be adjusted:

- A4/A3 version: 1/2/3/4mm
- LT/DLT version: 0.04"/0.08"/0.12"/0.16"

☐ Note:

Same as
Original

Full Color mode will be automatically selected. You cannot change the color mode.

Change

Full Color mode will be automatically selected. You can change the color mode as follows:

Color for the Shadow: Touch the Change key.	Acceptable Color Mode
Yellow, Orange, Red, Magenta, Blue Cyan, Green, Light-Green, User Colos 1 - 3, Scan Color	Full Color ↔ Same color mode as the color selected for the shadow.
Black	Full Color ↔ Black

Mirror Image (Keys = 1+5 on page 5-19)

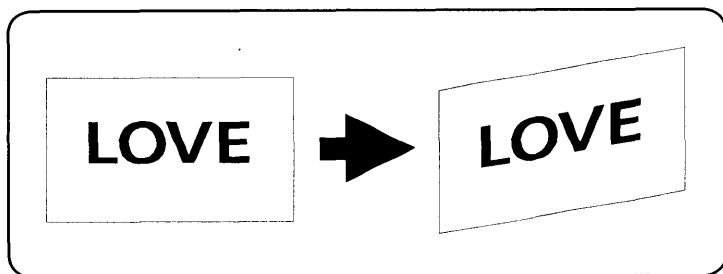
LOVE



ГОΛƎ

This function makes a mirror image copy of the original.

Slanted Image (Keys = 1+6 on page 5-19)



This function slants the copy image at a selected angle (from -45° ~ $+45^{\circ}$)

- ☐ The slant direction is decided as shown in the illustration.

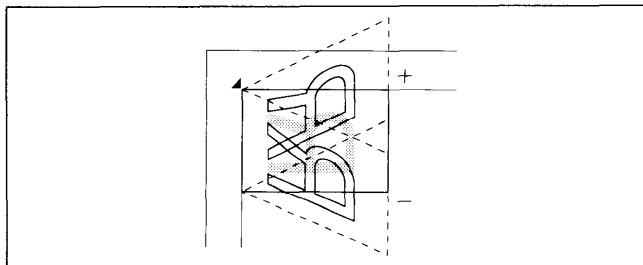
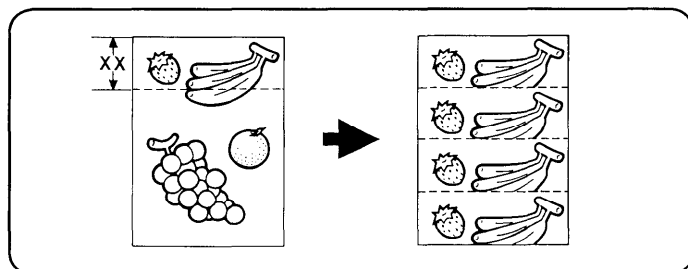


Image Repeat (Keys = 1+7 on page 5-19)

Color Sample:  Page 2-8

Part of the original image is copied repeatedly.

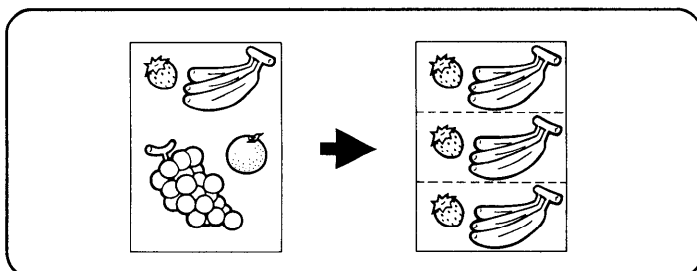
1. Size Input



This function allows you to reproduce the top band of an original repeatedly down the entire copy. You specify the width of the band and it is repeated as many times as will fit on the copy.

Touch the **Size Input** key, and enter the width of the band with the **Number** (0-9) keys, and touch the **#** key.

2. Number of Images

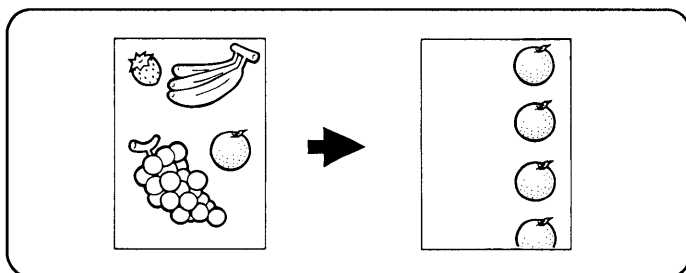


This function also allows you to reproduce the top band of an original repeatedly down the entire copy, but here you specify the number of image repetitions you want (2 ~ 9) and the copier will determine the width of the top band.

Touch the **No. of Images** key, enter the number of image repetitions with the **Number** (0-9) keys, and touch the **#** key.

3. Editor Input

The optional display editor is required for editor input method.



This function allows you to select an area of the original and reproduce it repeatedly down the copy. The repetitions are made one below the other, and are all aligned to the right.

Touch the **Editor Input** key. **Scan** the original image in the display editor and specify the area to repeat.

❑ For details about display operation, see page 4-14.

Chapter 6

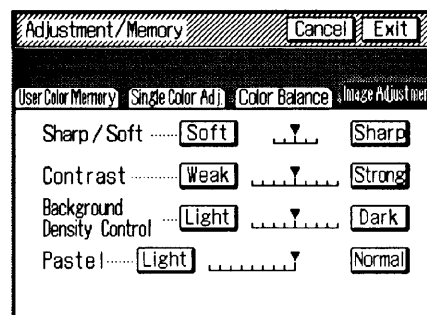
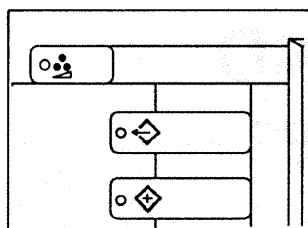
"ADJUSTMENT AND COLOR MEMORY"

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IMAGE ADJUSTMENT

Color Samples: see page 2-10



You can change the default settings for image adjustment. Touch the keys to change the level and then touch the **Exit** key.

Sharp/Soft

There are 5 levels for adjusting the edges of the image to make the image sharper or softer.

- ☐ The default setting is level 3.

Contrast

There are 9 levels for adjusting the contrast between light parts and dark parts of the image

- ☐ The default setting is level 5.

Background Density Control

There are 9 steps to adjust the background density control.

- ☐ If copying a newspaper, or an original with a dark background, touch the **Light** key and adjust the background density to a lighter setting.
- ☐ If part of the original is marked with a highlighting pen, touch the **Dark** key and adjust the background density to a darker setting.
- ☐ The default setting is level 5.

Pastel

There are 9 levels to make copies in pastel tones.

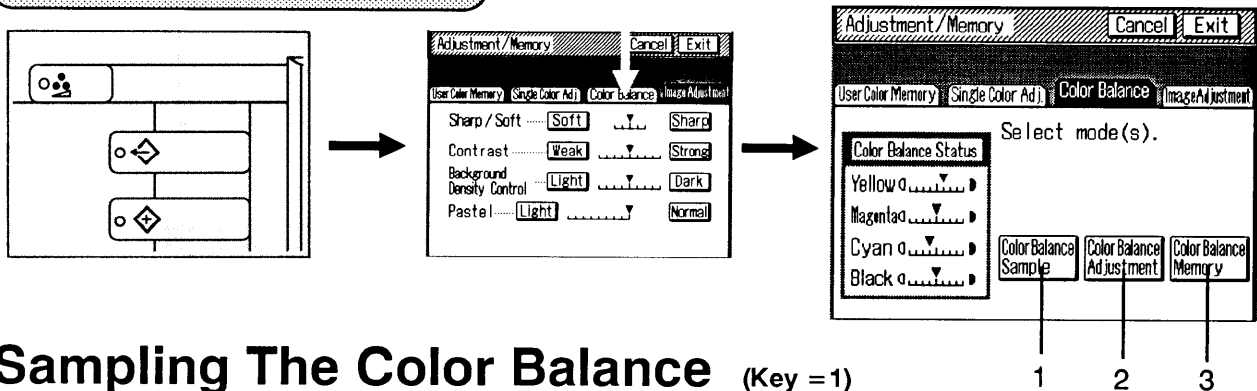
- ☐ The default setting is level 9 which yields a normal color copy.

COLOR BALANCE ADJUSTMENT

You can adjust the overall color tone of copies. You can change the tone of copies by adjusting cyan, magenta, yellow (the three basic colors) and black over 9 levels.

- ❑ When you adjust one of the three basic colors, the two neighboring colors in the color circle are also changed. For example, when cyan is lighter, green is changed to Yellow-green, and blue is also changed to magenta-blue.
- ❑ Make sure to touch the **Exit** key when you have finished adjusting the color balance.

Color Samples:  page 2-11



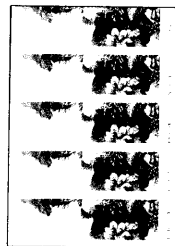
Sampling The Color Balance (Key = 1)

Color Sample:  page 2-11

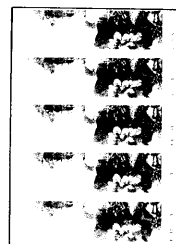


Standard + -4

Sample



- Standard (Current Balance Status)
- Yellow (+4)
- Magenta (+4)
- Cyan (+4)
- Black (+4)



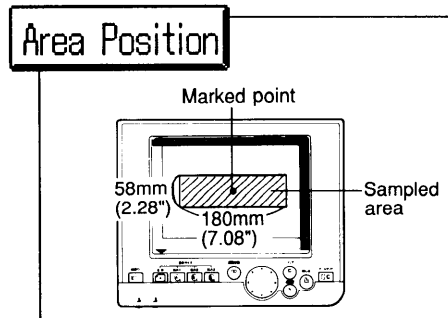
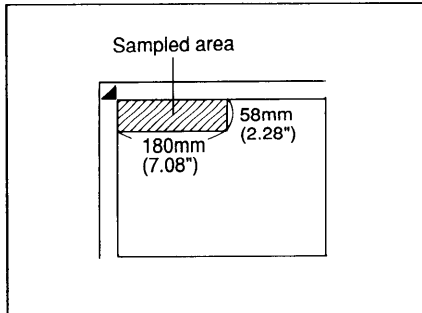
- Standard (Current Balance Status)
- Yellow (-4)
- Magenta (-4)
- Cyan (-4)
- Black (-4)

Adjusting the color balance by trial and error could require many copies. The color balance sampling mode allows you to produce 9 samples on 2 copies. The first sample of each sheet uses the current color balance. Each sample after that changes one toner color by a fixed number of steps.

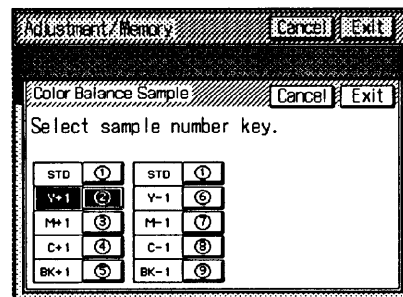
- ❑ **Standard = Current Color Balance Status**
- ❑ Selecting Color Balance Sample does *not* reset the adjustments, allowing you to make many samples while progressively changing the balance. The sample might yield a color balance outside the copier's range which will be reproduced on the sample but not on the copy. For example, if yellow is already adjusted to +3 and you select Sample + -4, the yellow samples will be copied at yellow +7 and -1, but the adjustment for the final copy *cannot* be set to +7.

COLOR BALANCE ADJUSTMENT

- ❑ The sample will be copied on two A4 or 8 1/2" x 11" sheets. Make sure that A4 or 8 1/2" x 11" sheets are loaded in this machine.
- ❑ After making samples, A4 or 8 1/2" x 11" is automatically selected. If you want to make copies with other sizes of paper, select the paper size manually or touch the **Auto Paper Select** key.
- ❑ If your machine is equipped with the optional display editor, you can select the sample area (within certain restrictions). To select the area, mark a point with the **Point** key. For details about display editor operation, see page 4-14.
If you do not have the display editor, the area shown below will be selected.

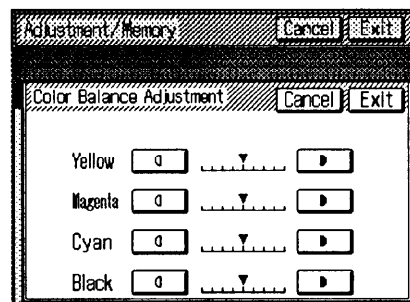
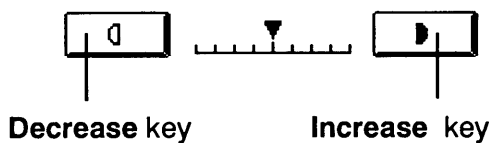


After sampling, select a sample number key and press the **Exit** key.



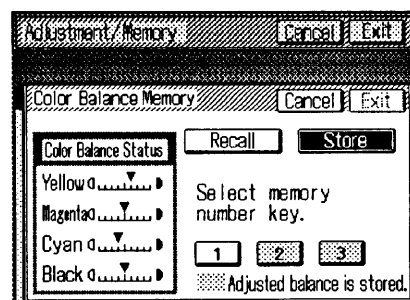
Color Balance Adjustment (Key = 2 on page 6-3)

You can change the color balance manually.



Color Balance Memory (Key = 3 on page 6-3)

The color balance setting will be canceled when you press the **Clear Modes/Stand by** key or turn off the main switch. You can store the color balance setting into memory and recall it whenever you want to use it.

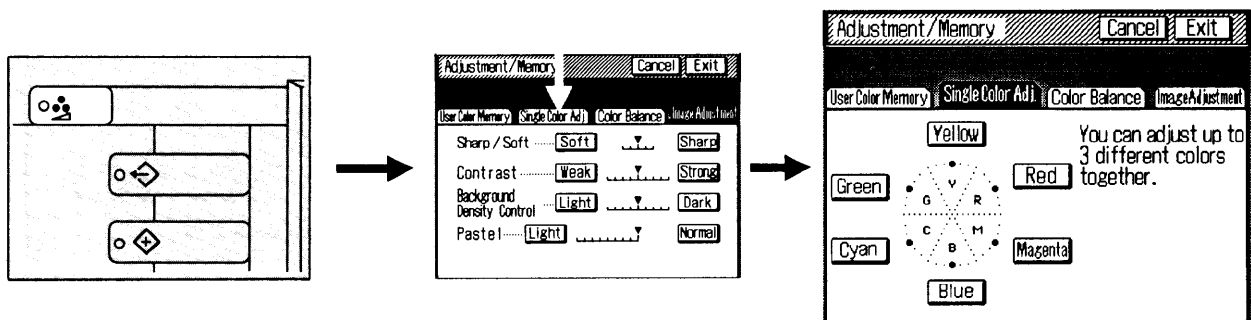


SINGLE COLOR ADJUSTMENT

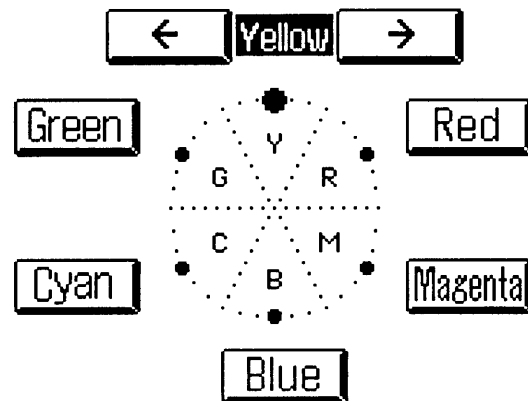
Color Samples:  page 2-10

For each of the colors in the circle, you can mix in one of the two adjacent colors. This will affect only image areas having the selected colors.

- ☐ Up to 3 colors can be adjusted.
- ☐ Make sure to touch the **Exit** key after you finish the single color adjustment.
- ☐ The single color adjustment is available only when Full Color mode or Auto Color mode is selected



For example, Yellow can be adjusted either to orange (red-yellow) or yellow-green.

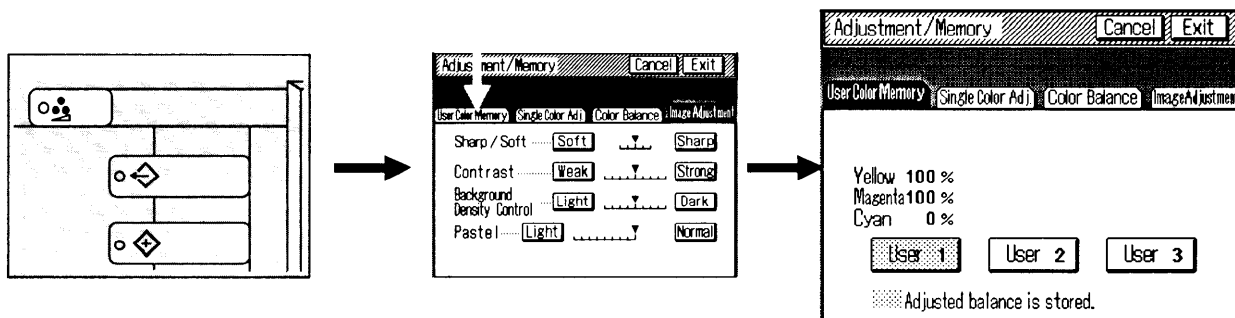


USER COLOR MEMORY

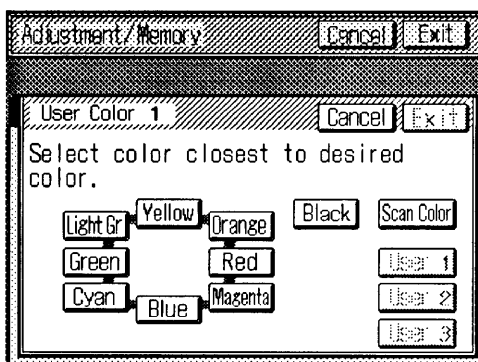
In addition to the standard single colors, you can store up to 3 colors into memory (User Color). The color can be scanned in from an original or mixed manually by the user.

User colors 1, 2, and 3 can be selected for the following modes:

- ☐ Single Color Copying
- ☐ Color Conversion
- ☐ Color Background
- ☐ Paint Image



Touch the key to which you want to store the color.



Scanning In A Color

This mode requires the optional display editor.

To scan in a color from the original, touch the **Scan Color** key. Scan the original image in the display editor and mark the point to scan in. After the color is scanned in, adjust the basic color ratio with the + or - key.

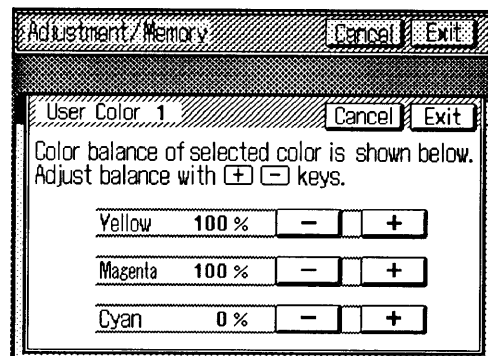
- ☐ For details about display editor operation, see page 4-14.

Mixing Colors Manually

To mix colors manually, touch the key for the color closest to the desired color.

For example, if you touch the **Red** key, Yellow 100% and Magenta 100% will be selected automatically. By touching the **+** or **-** key, adjust the color ratio to make the desired color.

- If you want to check the user color, make a single color copy. (☞ page 5-3)



CHAPTER 7

"AREA EDITING"

Table of Contents

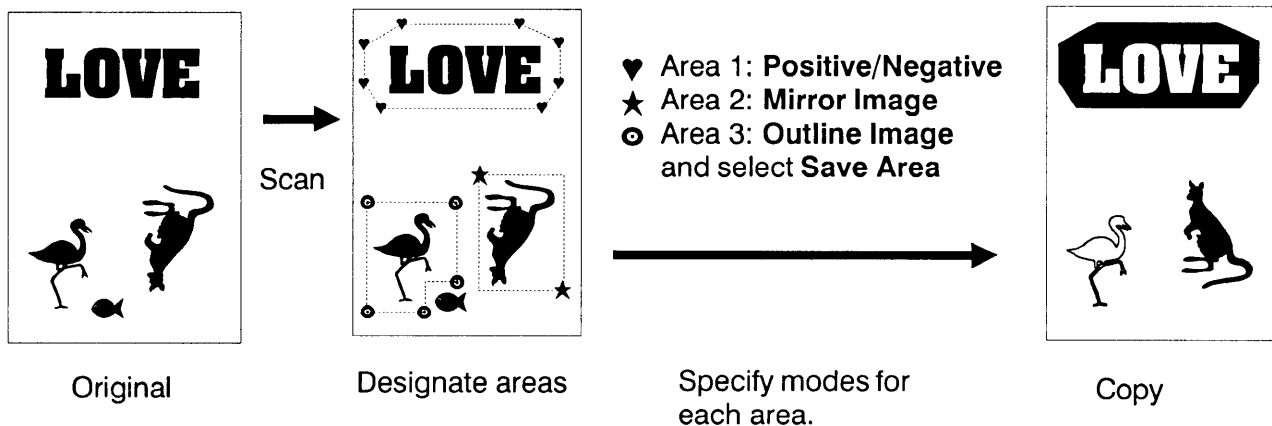
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WHAT IS AREA EDITING

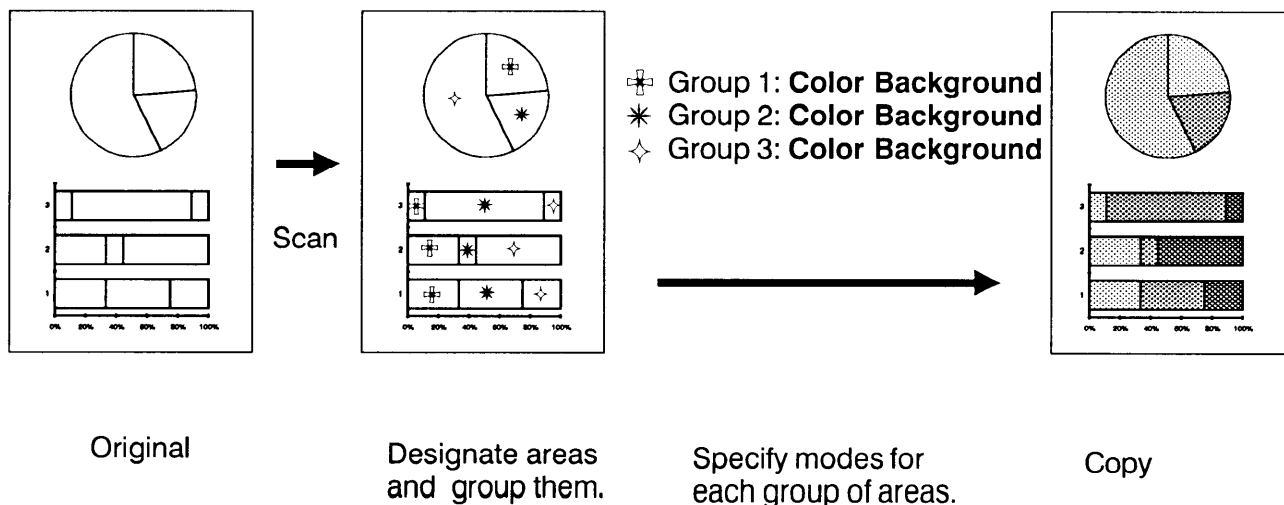
Note: The optional display editor is required for area editing.

If your machine is equipped with the optional display editor, you can designate areas on the original and edit the areas independently from other areas.

Example (Creative Editing):

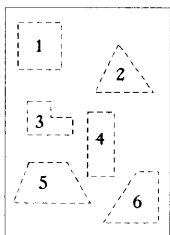


Example (Color Editing):



Creative Editing

Up to 6 areas can be designated.



- ❑ In Creative Editing mode, you can select up to three job patterns for at most six areas. After you have set three patterns, the copier will only allow you to choose the pattern of a previous area.
If you change the settings for one area, it will change the settings for all other areas with the same job pattern.
- ❑ Image Adjustment (Sharp/Soft, Contrast, Background Density, Pastel Image) can be applied for the outside area only when you select the adjustment levels, as explained in Chapter 6, before you start the area editing operation (explained in this chapter).

Cells marked ○ indicate modes that can be selected for inside the areas or outside all the areas.

- ❑ For details about designating the shape method (Rectangle/Right Angle Polygon/Polygon/Closed Loop) see page 7-10.

		Inside Area				Outside Area
		Rectangle	Right Angle Polygon	Polygon	Closed Loop	
Color/Image Adjustment	Full Color Copy	○	○	○	○	○
	Black Copy	○	○	○	○	○
	Single Color Copy	○	○	○	○	○
	Auto Image Density	*1○	*1○	*1○	*1○	*1○
	Manual Image Density	○	○	○	○	○
	Auto Letter/Photo	×	×	×	×	○
	Photo mode	○	○	○	○	○
	Letter mode	○	○	○	○	○
	Color Balance Adjustment	*2○	*2○	*2○	*2○	*2○
	Single Color Adjustment	*2○	*2○	*2○	*2○	*2○
Image Creation	Outline Image	○	○	○	×	○
	Positive/Negative Image	○	○	○	×	○
	Shadow Image	○	○	○	×	○
	Mirror Image	○	×	×	×	×
	Slanted Image	○	×	×	×	*3○
	Image Repeat	○	×	×	×	*3○
Color Creation	Color Conversion	○	○	○	×	○
	Color Erase	○	○	○	×	○
	Color Background	○	○	○	○	○
	Paint Area	○	○	○	○	○
Delete Area (Delete inside of an area)		○	○	○	×	
Save Area (Delete outside all areas)		○	○	○	×	

*1: Available only when Single Color Copy mode or Black Copy mode is selected.

*2: Available only when Full Color Copy mode is selected.

*3: Available only when one area is designated.

The following modes can be selected for the entire original image when in Creative Editing mode:

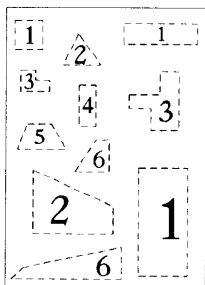
- ☐ Auto Paper Select
- ☐ Manual Paper Select
- ☐ By-pass Feed Select
- ☐ Sorting/Stacking (When the optional sorter is equipped on your machine.)
- ☐ Auto Reduce/Enlarge
- ☐ Full Size
- ☐ Fixed Reduction/Enlargement
- ☐ Zoom
- ☐ Size Magnification
- ☐ Directional Size Magnification
- ☐ Poster Mode:
 - Not available when more than one area is designated.
 - Available only when the area is designated in the Rectangle method and Save Area is selected.
- ☐ Centering/Cornering
 - Not available when more than one area is designated.
 - Available only when the area is designated by the Rectangle method and Save Area is selected.
- ☐ Margin Adjustment
- ☐ User Program
- ☐ Auto Start
- ☐ Projector (When the optional projector unit is equipped on your machine.)
- ☐ Memory Call

Cells marked ○ indicate modes that can be selected together when in Creative Editing mode.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
1. Full Color Copy	■	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2. Black Copy	×	■	×	○	○	○	○	×	×	○	○	○	○	○	○	×	○	×	×	○	○	○	○	○	○	○
3. Single Color Copy	×	×	■	○	○	○	○	×	×	○	○	○	○	○	○	○	○	×	○	○	○	○	○	○	○	○
4. Auto Image Density	×	○	○	■	○	○	○	×	×	○	○	○	○	○	○	×	×	×	×	○	○	○	○	○	○	○
5. Manual Image Density	○	○	○	○	■	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
6. Letter Mode	○	○	○	○	○	■	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
7. Photo Mode	○	○	○	○	○	×	■	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
8. Single Color Adjustment	○	×	×	×	○	○	○	■	○	×	○	○	○	○	○	×	×	×	×	○	○	○	○	○	○	○
9. Color Balance Adjustment	○	×	×	×	○	○	○	○	■	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
10. Outline Image	○	○	○	○	○	○	○	×	×	■	○	○	○	○	○	×	×	×	×	○	○	○	○	×	○	○
11. Positive Negative	○	○	○	○	○	○	○	○	○	○	■	○	○	○	○	○	○	○	×	○	○	○	○	○	○	○
12. Shadow Image	○	○	○	○	○	○	○	○	○	○	○	■	○	○	○	○	○	○	×	○	○	○	○	×	○	○
13. Mirror Image	○	○	○	○	○	○	○	○	○	○	○	○	■	○	○	○	○	○	×	○	○	○	○	○	○	○
14. Slanted Image	○	○	○	○	○	○	○	○	○	○	○	○	○	■	○	○	○	○	×	○	○	○	○	×	○	○
15. Image Repeat	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	■	○	○	×	○	○	○	○	×	×	×
16. Color Conversion	○	×	○	×	○	○	○	×	○	×	○	○	○	○	○	○	■	○	○	×	○	○	○	○	×	○
17. Color Erase	○	○	○	×	○	○	○	×	○	×	○	○	○	○	○	○	○	○	×	○	○	○	○	×	○	○
18. Color Background	○	×	×	×	○	○	○	×	○	×	○	○	○	○	○	○	○	○	○	■	×	○	○	○	×	○
19. Paint Area	○	×	○	×	○	○	○	×	○	×	×	×	×	×	×	×	×	×	×	○	○	○	○	×	○	○
20. Fixed Reduce and Enlarge	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	■	×	×	×	×	○
21. Zoom	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	○	■	×	×	×	○
22. Size Magnification	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	×	○	■	×	×	○
23. Directional Size Magnification	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	×	×	○	■	×	○
24. Poster Mode	○	○	○	○	○	○	○	○	○	×	○	×	○	×	×	×	×	×	×	×	×	×	×	○	×	×
25. Centering Cornering	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	○	○	○	×	×	×	○	×
26. Margin Adjustment	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	○	○	○	○	○	○	○	○	×	×	○

Color Editing

Up to 6 groups of multiple areas can be edited. All the areas should belong to groups 1 to 6.



- ☐ In Color Editing mode, you can select up to three job patterns for at most six groups. After you have set three patterns, the copier will only allow you to choose the pattern of a previous group. If you change the settings for one group, it will change the settings for all other groups with the same job pattern. However, if you used a paint setting, changing the color in one group will not affect other groups. (Up to 6 paint colors can be selected.)
- ☐ Image Adjustment (Sharp/Soft, Contrast, Background Density, Pastel Image) can be applied for the outside area only when you select the adjustment levels, as explained in Chapter 6, before you start the area editing operation (explained in this chapter).

Total number of areas which can be designated:

- Rectangle method: at most 250 areas
- Right Angle Polygon method: at most 50 areas
- Polygon method: at most 50 areas
- Closed Loop method: at most 500 areas

☐ For details about designating method (Rectangle/Right Angle Polygon/Polygon/Closed Loop), see page 7-10.

☐ Areas grouped together must be made in compatible modes.

Cells marked ○ indicate modes that can be selected for each group of areas and outside all the designated areas.

		Inside Area				Outside Area
		Rectangle	Right Angle Polygon	Polygon	Closed Loop	
Color/Image Adjustment	Full Color Copy	○	○	○	○	○
	Black Copy	○	○	○	○	○
	Single Color Copy	○	○	○	○	○
	Auto Image Density	*1○	*1○	*1○	*1○	*1○
	Manual Image Density	○	○	○	○	○
	Auto Letter/Photo	×	×	×	×	○
	Photo mode	○	○	○	○	○
	Letter mode	○	○	○	○	○
	Color Balance Adjustment	*2○	*2○	*2○	*2○	*2○
	Single Color Adjustment	*2○	*2○	*2○	*2○	*2○
Color Creation	Color Background	○	○	○	○	○
	Paint Area	○	○	○	○	○
Delete Area (Delete inside of an area)		○	○	○	×	
Save Area (Delete outside of all areas)		○	○	○	×	

*1: Available only when Single Color Copy mode or Black Copy mode is selected.

*2: Available only when Full Color Copy mode is selected.

The following modes can be selected for the entire original image when in Color Editing mode:

- ☐ Auto Paper Select ☐ Manual Paper Select ☐ By-pass Feed Select
- ☐ Sorting/Stacking (When the optional sorter is equipped on your machine.)
- ☐ Auto Reduce/Enlarge ☐ Full Size ☐ Fixed Reduction/Enlargement
- ☐ Zoom ☐ Size Magnification ☐ Directional Size Magnification
- ☐ Centering/Cornering
Not available when more than one area is designated.
Available only when the area is designated in the Rectangle method and Save Area is selected.
- ☐ Margin Adjustment ☐ Auto Start
- ☐ Projector (When the optional projector unit is equipped on your machine.)

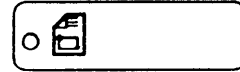
WHAT IS AREA EDITING

Cells marked ○ indicate modes that can be selected together when in Color Editing mode.

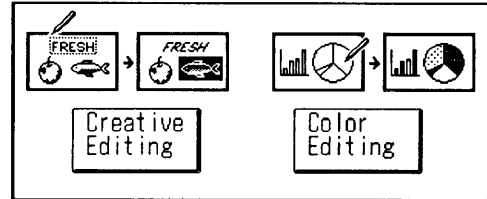
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. Full Color Copy	■	×	×	×	○	○	○	○	○	○	○	○	○	○	○	○	○	○
2. Black Copy	×	■	×	○	○	○	○	×	×	×	×	○	○	○	○	○	○	○
3. Single Color Copy	×	×	■	○	○	○	○	×	×	○	○	○	○	○	○	○	○	○
4. Auto Image Density	×	○	○	■	○	○	○	×	×	×	×	○	○	○	○	○	○	○
5. Manual Image Density	○	○	○	○	■	○	○	○	○	○	○	○	○	○	○	○	○	○
6. Letter Mode	○	○	○	○	○	■	×	○	○	○	○	○	○	○	○	○	○	○
7. Photo Mode	○	○	○	○	○	×	■	○	○	○	○	○	○	○	○	○	○	○
8. Single Color Adjustment	○	×	×	×	○	○	○	■	○	×	×	○	○	○	○	○	○	○
9. Color Balance Adjustment	○	×	×	×	○	○	○	○	■	○	○	○	○	○	○	○	○	○
10. Color Background	○	×	○	×	○	○	○	×	○	■	×	○	○	○	○	×	○	○
11. Paint Area	○	×	○	×	○	○	○	×	○	×	■	○	○	○	○	×	○	○
12. Fixed Reduce and Enlarge	○	○	○	○	○	○	○	○	○	○	○	■	×	×	×	×	○	○
13. Zoom	○	○	○	○	○	○	○	○	○	○	○	×	■	×	×	×	○	○
14. Size Magnification	○	○	○	○	○	○	○	○	○	○	○	×	×	■	×	×	○	○
15. Directional Size Magnification	○	○	○	○	○	○	○	○	○	○	○	×	×	×	■	×	×	○
16. Poster Mode	○	○	○	○	○	○	○	○	○	×	×	×	×	×	×	■	×	×
17. Centering Cornering	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	×	■	○
18. Margin Adjustment	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	×	○	■

BASIC OPERATION OF AREA EDITING

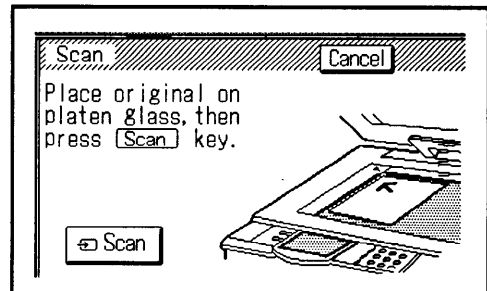
1. Press the **Area Edit** key.



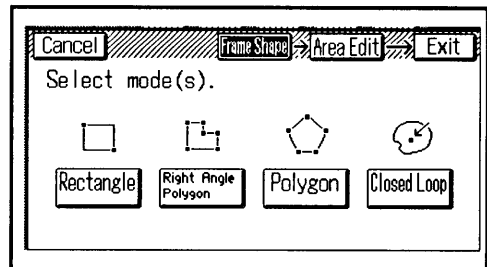
2. Touch the **Creative Editing** key or the **Color Editing** key.
(☞ pages 7-3 and 7-6)



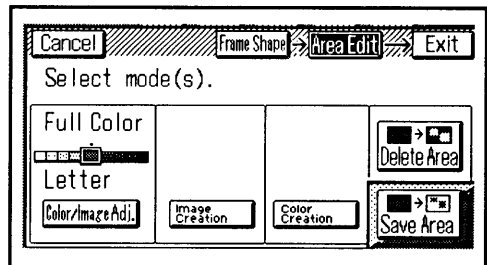
3. Place the original on the exposure glass and touch the **Scan** key on the touch panel display or press the **Scan** key of the display editor.
The original image will appear on the display.



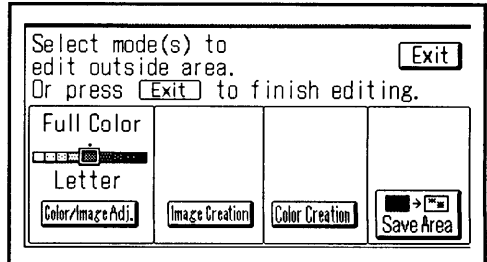
4. Touch the desired shape key for the designated area and designate the areas with the display editor.
(☞ page 7-10)



5. Select modes for inside the areas or groups. (☞ page 7-13)



6. Select modes for outside the areas or groups. (☞ page 7-17)

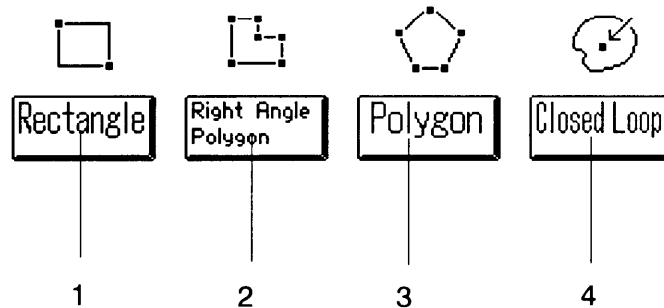


Others:

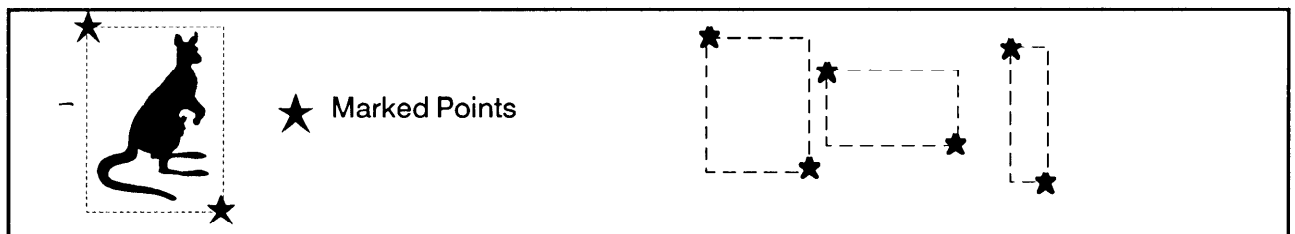
- ☐ Check job settings (☞ page 7-18)
- ☐ Change default settings (☞ page 7-19)
 - Paper Selection
 - Sorting/Stacking
 - Enlargement/Reduction
 - Image Shifting

DESIGNATING AREAS

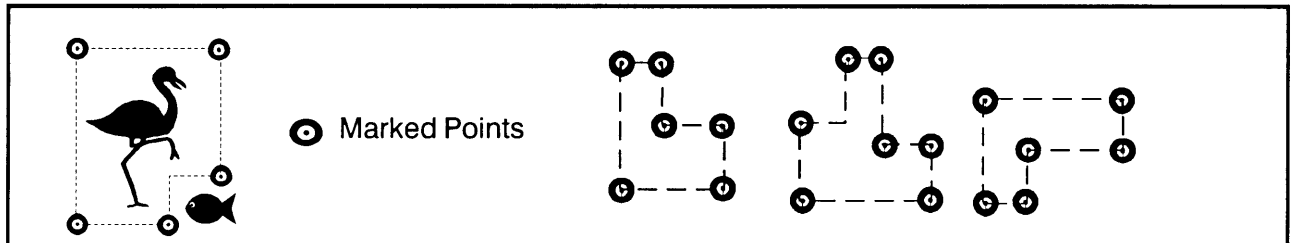
The designated area can be one of four shapes:



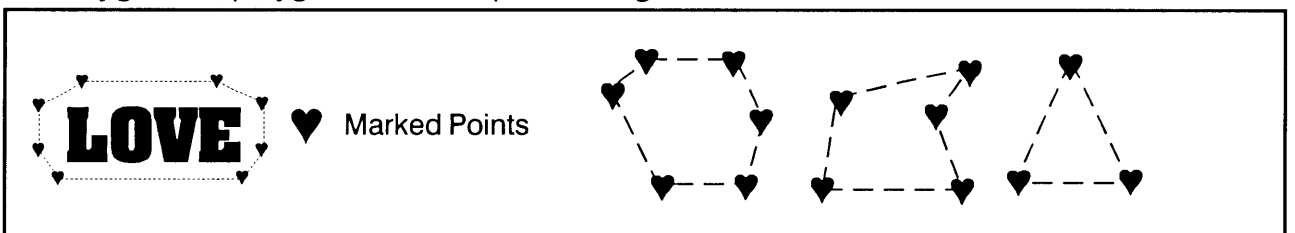
1. **Rectangle:** A rectangle of designated size.



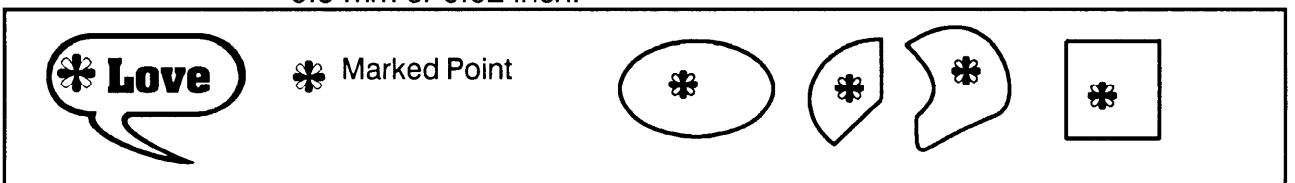
2. **Right Angle Polygon:** A polygon that has up to 10 right angles.



3. **Polygon:** A polygon that has up to 10 angles.

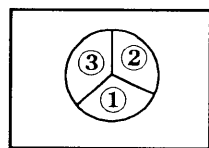


4. **Closed Loop:** An enclosed area which can be selected by designating a point within the area. The thickness of the outline should be more than 0.5 mm or 0.02 inch.

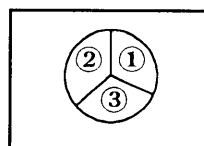


Notes for designating areas:

- ☐ Before selecting the shape for designating the area, check which functions can be applied for each shape in the tables (☞ pages 7-3 and 7-6).
- ☐ Do not designate an area which overlaps part of another area.
In Creative Editing mode, the job settings specified for the area designated last will be applied for the overlapped portion.
In Color Editing mode, the job settings might not function as specified.
- ☐ The more areas you designate, the more time copying will take.
- ☐ If you designate an area in Right Angle Polygon mode, make sure to mark points that make right angles. If you mark a point which does not match for making a right angle, the editor will automatically specify the point to make it a right angle.
- ☐ If you mark a line and it overlaps another line you previously marked, the last point you marked will be canceled automatically.
- ☐ Because the display editor scans at 100 dpi, the inner side of curved outline might be jagged.
- ☐ Under the following condition, the machine might not detect a closed loop area completely.
 - The outline is thinner than 0.5mm or 0.02 inch.
 - The outline is not completely closed, it is too light to detect, or the thickness is uneven.
 - The outline is not black.
 - The space between outlines is too small.
 - The outline is jagged.
- ☐ To paint adjacent areas well, select them right to left, then top to bottom. If areas are not designated in that order, white lines might appear between two adjacent areas. This is especially important for pie charts.

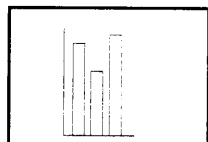


X (White lines might appear)

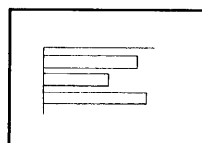


O (Better result)

- ☐ For column charts, place the original so that the columns are oriented in the same way as paper moves.



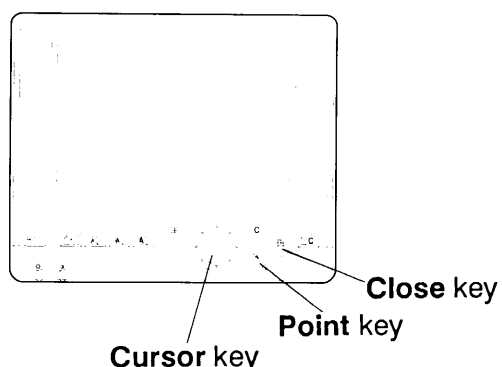
X (White lines might appear)



O (Better result)

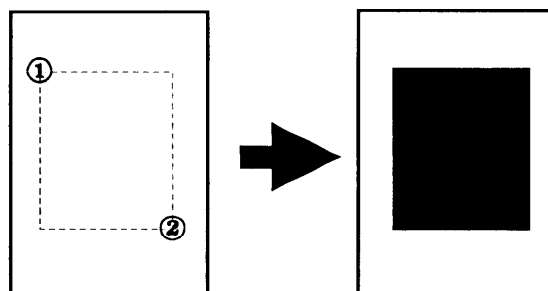
How To Designate An Area

Before designating areas, refer to the key functions and basic operation of the display editor. (☞ page 4-14)

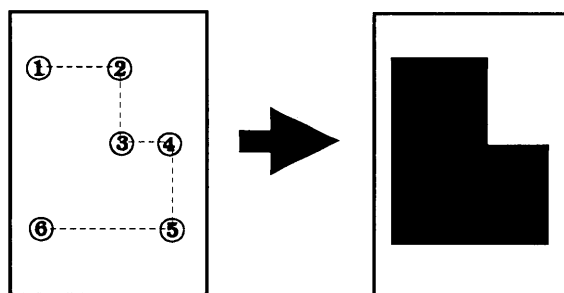


A. Rectangle

Move the cursor with the **Cursor** key and mark 2 diagonally opposite corners (①,②) with the **Point** key.

**B. Right Angle Polygon**

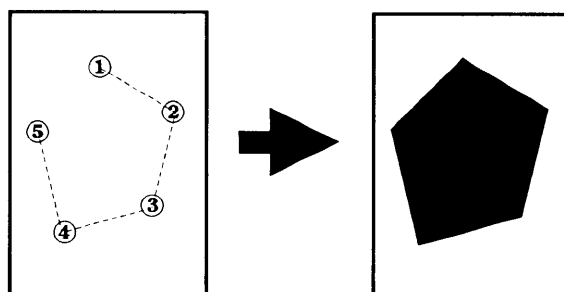
1. Move the cursor with the **Cursor** key and mark all corners (①,②,③,④,⑤,⑥) one by one with the **Point** key. Make sure that the corners are at right angles.



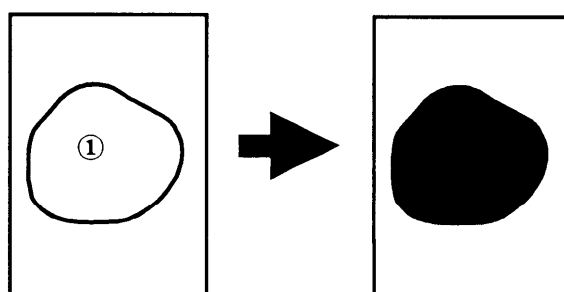
2. Press the **Close** key. The area will be enclosed.

C. Polygon

1. Move the cursor with the **Cursor** key and mark all corners (①,②,③,④,⑤) one by one with the **Point** key.
2. Press the **Close** key. The area will be enclosed.

**D. Closed Loop**

Move the cursor with the **Cursor** key and mark a point (①) within the enclosed area.



JOB SETTINGS FOR INSIDE THE AREA

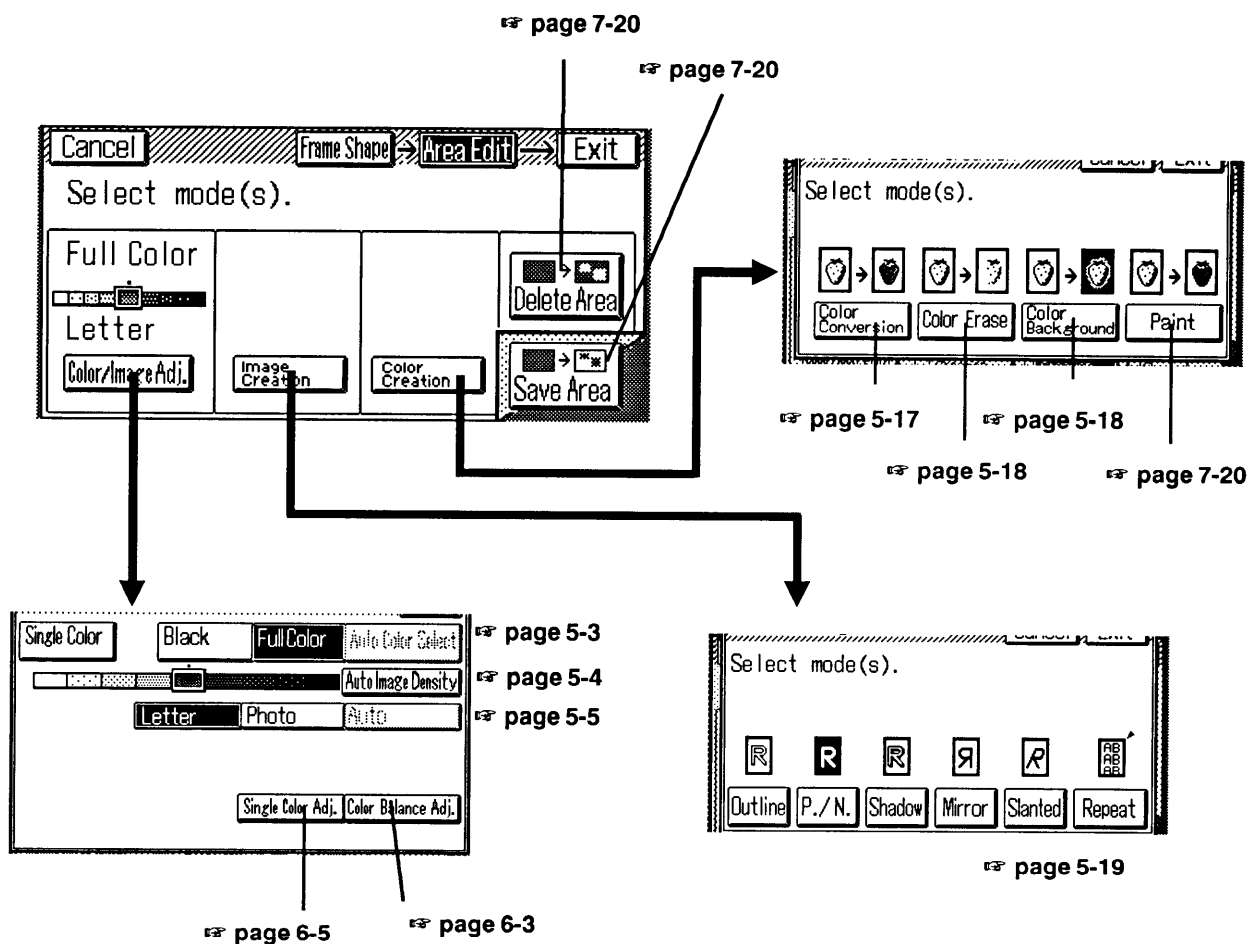
Note:

- ❑ The available modes for area editing depend on the shape of the area. Refer to the tables on pages 7-3 and 7-6 and check if the desired modes can be selected.
- ❑ Check if the desired modes can be selected together. Refer to the tables on pages 7-5 and 7-8.

Creative Editing

Select modes for an area in the same way as for the entire image. For more details, refer to chapters 4, 5, and 6.

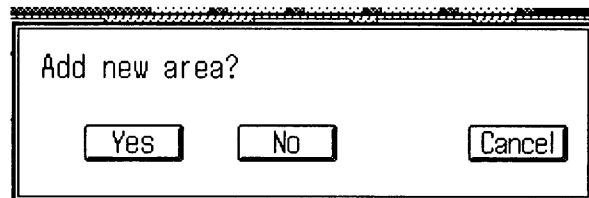
1. Select the desired modes for the area and enter data if needed.



JOB SETTINGS FOR INSIDE THE AREA

2. To finish choosing modes for the selected area, touch the **Exit** key.
3. To end your job settings for inside all the designated areas, touch the **No** key.

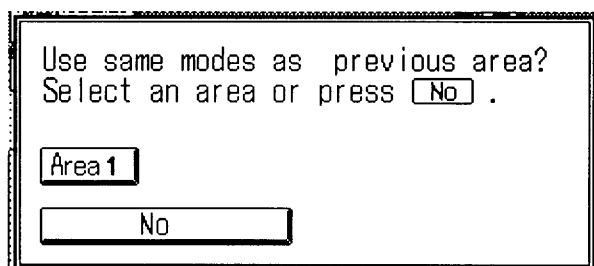
If you want to designate another area, touch the **Yes** key.



- ❑ After designating the next area (Area 2), the following message will appear on the touch panel display.

If the desired mode settings for Area 2 are the same as for Area 1, touch the **Area 1** key.

If the desired mode settings are not the same as for Area 1, press the **No** key.

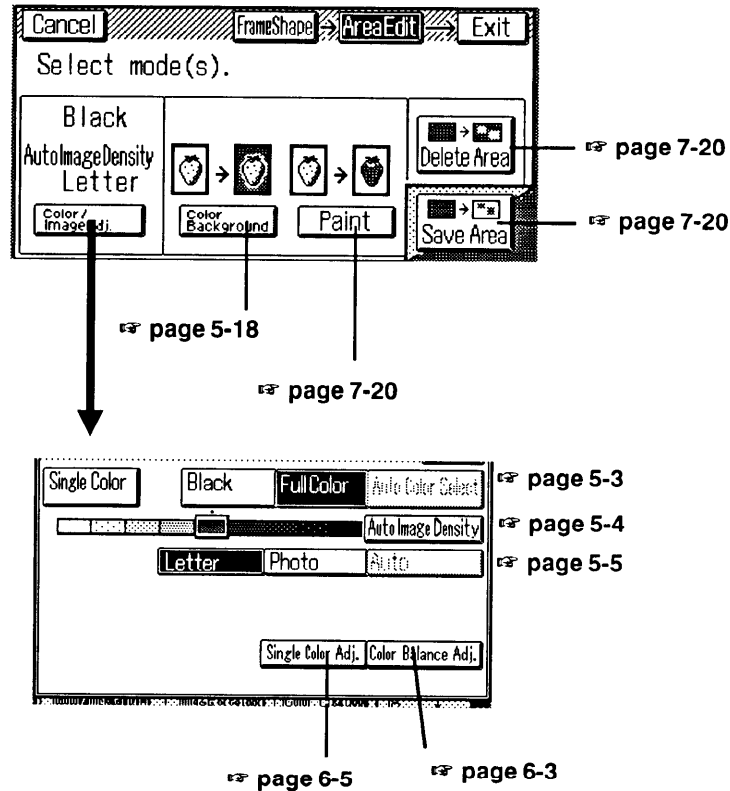


- ❑ In Creative Editing mode, you can select up to three job patterns for at most six areas. After you have set three patterns, the copier will only allow you to choose the pattern of a previous area. If you change the settings for one area, it will change the settings for all other areas with the same pattern.

Color Editing

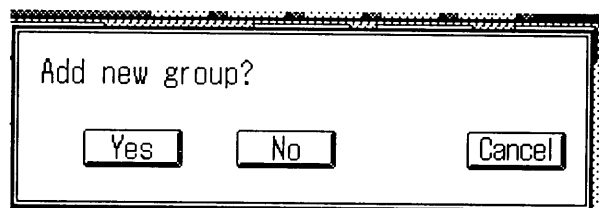
Select modes for a group of areas in the same way as for the entire image. For more details, refer to chapter 4, 5, and 6.

1. Select the desired modes for the group and enter data if needed.



2. To finish selecting modes for the selected group of areas, touch the **Exit** key.
3. To end your job settings for inside all groups, touch the **No** key.

If you want to designate another group of areas, touch the **Yes** key.

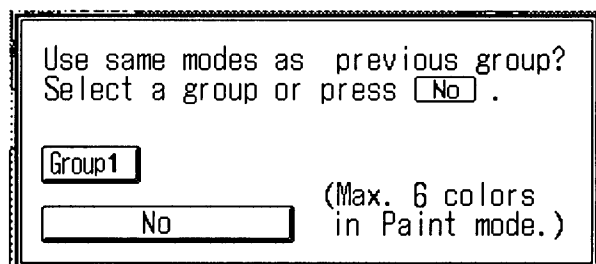


- ❑ After designating the next group of areas (Group 2), the following message will appear on the touch panel display.

If the desired mode settings for Group 2 is just the same as for Group 1, touch the **Group 1** key.

If the desired mode settings are not the same as for Group 1, press the **No** key.

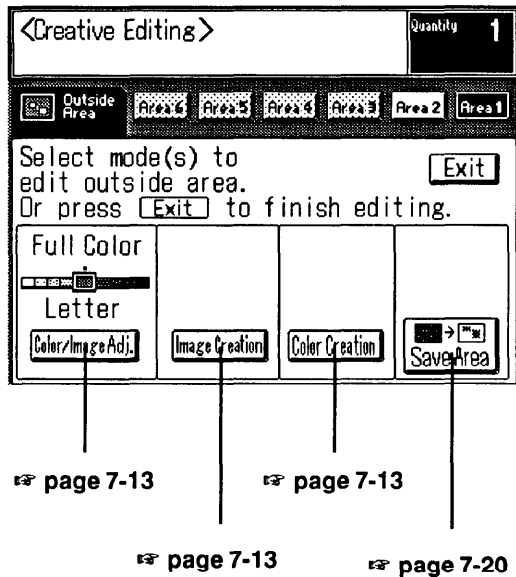
- ❑ In Color Editing mode, you can select up to three job patterns for at most six groups. After you have set three patterns, the copier will only allow you to choose the pattern of a previous group. If you change the settings for one group, it will change the settings for all other groups with the same pattern. However, if you used a paint setting, changing the color in one group will not affect other areas. (Up to 6 paint colors can be selected.)



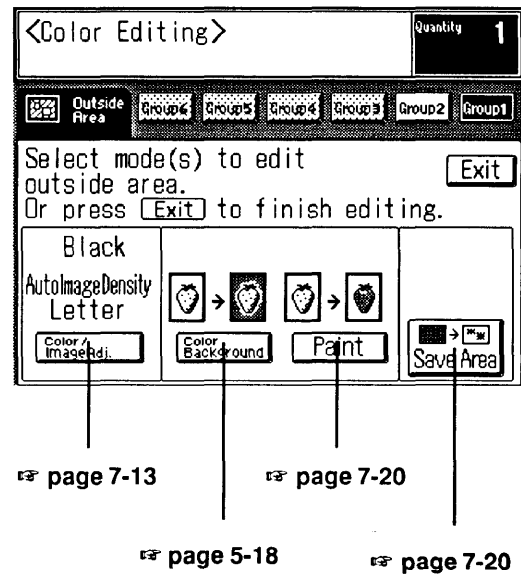
JOB SETTINGS FOR OUTSIDE AREAS

1. Select modes for outside all the designated areas.

Creative Editing



Color Editing



2. To finish selecting modes for outside all the designated areas, touch the **Exit** key.
3. You can start your copy job by pressing the **Start** key.

CHECKING JOB SETTINGS

After you have finished selecting modes for each area, you can check the selected mode for them.

Creative Editing

- ☐ Touch one of the the **Area** keys you want to check.
- ☐ You can also check the modes for outside areas by touching the **Outside** key.
- ☐ If you want to designate another area, touch the **Add Area** key.

The screen displays the title "<Creative Editing> Ready" and a "Quantity 1" field. Below this is a settings bar with "Paper: Auto R/E", "Reduce/Enlarge: 100 %", "Shift: Off", and "Sorter: Off". The main instruction reads: "Press Start key. Or select area key to check or change modes." There are buttons for "Area 1", "Area2", "Area3", "Area4", "Area5", "Area6", "Outside", and "Add Area".

Color Editing

- ☐ Touch one of the **Group** keys you want to check.
- ☐ You can also check the modes for outside areas by touching the **Outside** key.
- ☐ If you want to designate another area, touch the **Add Group** key.

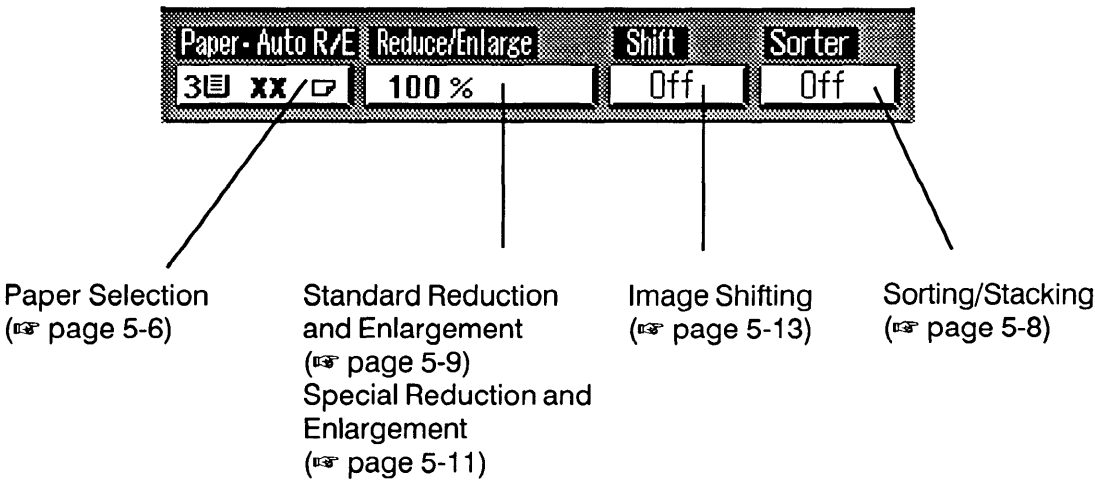
The screen displays the title "<Color Editing> Ready" and a "Quantity 1" field. Below this is a settings bar with "Paper: Auto R/E", "Reduce/Enlarge: 100 %", "Shift: No", and "Sorter: No". The main instruction reads: "Press Start key. Or select [Group] key to check or change modes." There are buttons for "Group1", "Group2", "Group3", "Group4", "Group5", "Group6", "Outside", and "Add Group".

To finish checking the job settings, touch the **Exit** key.

CHANGING JOB SETTINGS FOR THE ENTIRE IMAGE

Refer to pages 7-4 and 7-7 to check which modes you can select for the entire image.

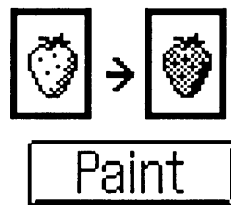
If you want to change the job settings for the entire image, use the keys below:



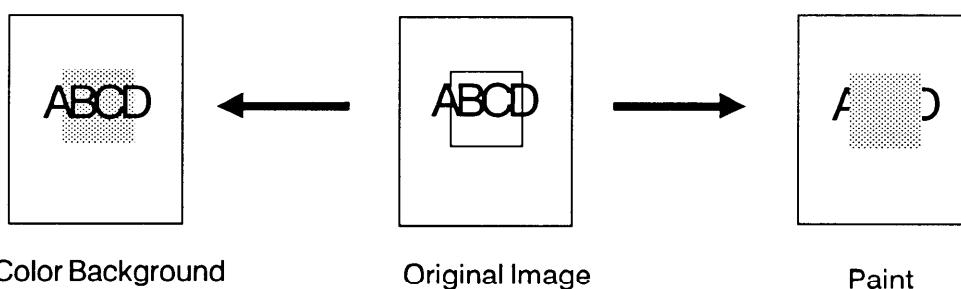
FUNCTIONS ONLY FOR AREA EDITING

Paint Area

To fill the designated area with a selected color, touch the **Paint** key.

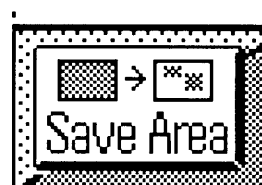
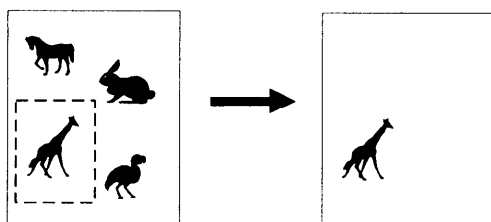


Paint Area mode and Color Background mode are different:



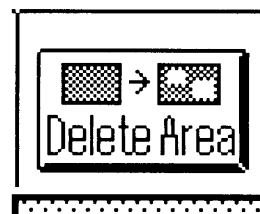
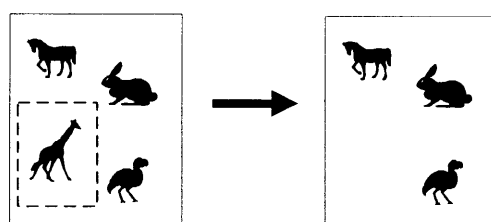
Save Area

To delete the images outside the designated areas, touch the **Save Area** key.



Delete Area

To delete the selected designated area, touch the **Delete Area** key.



CHAPTER 8

"USER TOOLS/USER CODE"

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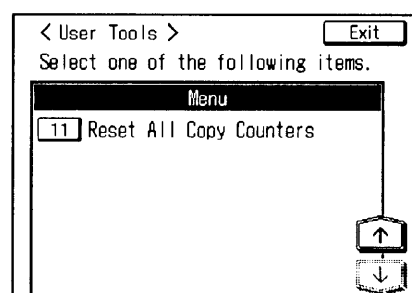
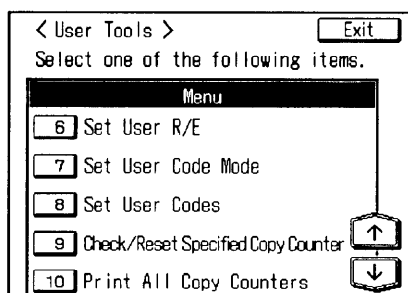
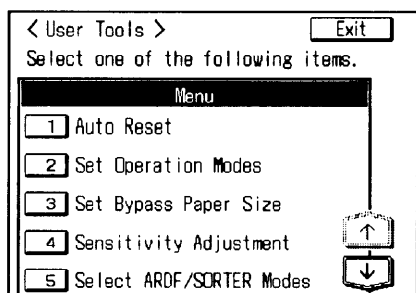
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CHANGING DEFAULT SETTINGS

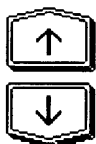
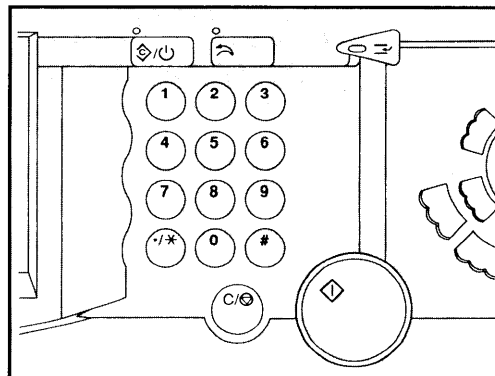
You can change the copier's default settings using the following user tools.

User Tools Menu

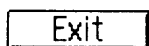


How To Access The User Tools

1. Press the **Clear Modes/Stand by** key.
2. Press the **Clear/Stop** key more than 3 seconds until the User Tool Menu appears on the touch panel display.
3. Select the menu number you want to use by touching the touch panel display.



This copier has 11 user tools. You can see 5 user tools on the touch panel display at one time. Use these keys to see other user tools.




Use to exit from the user tool menu.

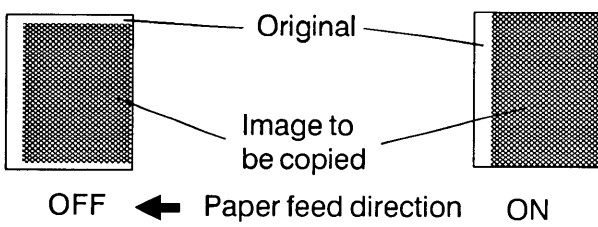


Use to return to the user tool menu.

1 Auto Reset

Auto Reset	The copier returns to its initial condition automatically after your job is finished. The automatic reset time can be set from 10 seconds to 900 seconds, or the function can be turned off. <input type="checkbox"/> default: 60 sec.
Screen Saver	When the machine does not detect anyone operating it for the selected time, the touch panel display turns off automatically. This time can be set from 10 seconds to 900 seconds, or the function can be turned off. <input type="checkbox"/> default: OFF
SADF Auto reset (for machine with dual job feeder only)	In the SADF mode (Semi-Automatic Document Feed mode  page 4-6 "Set One Original At A Time"), if the next original is not set within the selected time, the machine will cancel the Semi-Automatic Document Feed mode automatically. The SADF Auto reset time can be set from 1 to 99 seconds, or the function can be turned off. <input type="checkbox"/> default: 5 sec.

2 Set Operation Modes

Maximum copy input number	The maximum copy quantity can be set from 1 to 99. <input type="checkbox"/> default: 99
3 Side Full Image	<p>In the default setting, narrow margins on all four sides will not be copied as shown in the illustration.</p>  <p><input type="checkbox"/> default: OFF <input type="checkbox"/> You cannot cancel the leading edge margin.</p>
Auto Tray Switching	If you load paper of the same size and in the same direction in two or more paper trays, the machine automatically shifts to another tray when the tray in use runs out of paper. <input type="checkbox"/> default: ON <input type="checkbox"/> By-pass feed tray cannot be used for Auto Tray Shifting.
Panel beeper	The beeper (key tone) can be set to on or off. <input type="checkbox"/> default: ON
Editor Grid Display (for machine with display editor only)	You can set the grid snap on or off in the display editor. The grids may help you to mark a right angle shape. <input type="checkbox"/> default: OFF

3 Set Bypass Paper Size

If you load non-standard paper in the by-pass feed tray, the machine cannot detect the paper size and direction and the copied image might not be correctly positioned on the copy paper. One non-standard paper size and direction data is always specified in the user tool, and if the non-standard paper size you are going to use is different from this, change the paper size and direction data with this user tool to make a correct copy. (Horizontal direction: 148 - 432 mm or 5.8" - 17.0", Vertical direction: 100 - 297 mm or 3.9" - 11.7")

Sensitivity Adjustment

Color Mode	When copying in full color, 4C (4 color toners = Yellow, Magenta, Cyan, and Black) is used in the default mode. You can change this so that only 3C (3 color toners = Yellow, Magenta, and Cyan) is used. <input type="checkbox"/> default 4C (4 color toners)
U.C.R Adjust	In the Auto (Letter/Photo) mode or Photo mode, black letters and lines might not be reproduced well. The UCR adjustment reduces or removes the weakest color in order to emphasize the black parts of the image. This is useful for improving the readability of: <ul style="list-style-type: none"> • Black lettering in colored areas • Black and white originals when copying in Auto Color mode and Auto (Letter/Photo) mode. It can be adjusted within 9 levels ("Weak" to "Strong"). <input type="checkbox"/> default: level 5
Color Erase	When in the Color Erase mode, the function can be made more or less sensitive to the color to erase. It can be adjusted within 5 levels. ("Narrow" to "Wide"). <input type="checkbox"/> default: level 3 For example, suppose red is erased, selecting "Narrow" will result in only red being erased, and selecting "Wide" will result in other colors close to red being erased.
Color Background	When in the Color Background mode, the background density can be adjusted to within 5 levels ("Weak" to "Strong"). <input type="checkbox"/> default: level 3
Color Conversion	When in the Color Conversion mode, the function can be made more or less sensitive to the color to convert. It can be adjusted within 5 levels ("Narrow" to "Wide"). <input type="checkbox"/> default: level 3 For example, suppose red is converted to a scanned color, selecting "Narrow" will result in only red being converted, and selecting "Wide" will result in other colors close to red being converted.

Next

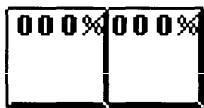
Prev.

A.D.S	The Auto Image Density levels can be adjusted to lighter or darker (4 levels). <input type="checkbox"/> default: level 2
Auto L/P	When in the Auto (Letter/Photo) mode, the copier can be set to lean towards Letter mode (levels 1 to 4) or towards Photo mode (levels 6 to 9). This function is useful when copying originals that have mixed image and character areas, for example maps. Depending on the sensitivity setting, small characters might not be detected as letters. <input type="checkbox"/> default: level 5
Auto Color Select	When in Auto Color Select mode, Black Copy mode will be selected automatically for black and white originals. The copier sees pure grays as black and white. However, for many types of originals such as magazine pages, gray is a combination of several colors that appear gray to us but that appear as color to the copier. The copier can be made to lean towards Black Copy (levels 1 to 2) or towards Full Color Copy (levels 4 to 5). <input type="checkbox"/> default: level 3

5 **Select ARDF/SORTER modes**

ARDF: Thin paper mode (for machine with dual job feeder only)	Use when changing the type of original to be fed. Select this function when you use thin originals (lighter than 53 gm ² or 14 lb). <input type="checkbox"/> default: OFF
SORTER: Color Copy Sorting Prohibition	The machine can be set to disable the sorting or stacking modes for color copying. <input type="checkbox"/> default: OFF

6 **Set User R/E**



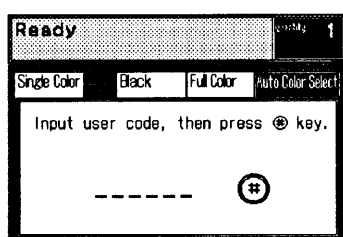
In the Preset R/E (Reduction/Enlargement) mode, reproduction ratios on 12 keys are already fixed but you can register desired reproduction ratios into additional 2 keys. Touch one of the two keys and enter the desired reproduction ratio with the **Number (0-9)** keys and then touch the **#** key.

USER TOOLS FOR USER CODE MODE

User tools 7,8,9,10, and 11 are for the User Code mode. When you want to use these user tools, you should enter the key operator access code first. Please ask your sales or service representative for the key operator access code when the representative sets the user tools for the User Code mode.

If your machine is set to the User Code mode, to prevent others from making copies using your user code, while pressing the Clear Modes/Stand by key, press the Clear/Stop key after copying.

7 Set User Code Mode



If the copier is set to use the User Code function, operators must input their user codes before the machine can operate. The copier keeps count of the number of copies made under each user code. To have the machine set to the User Code mode, please contact your sales or service representative. You can select under which condition the user code mode should function. (**Full Color/Single Color/Black**)

8 Set User Codes

Register	Use to register your user code (maximum:6 digits). <input type="checkbox"/> Up to 20 user codes can be registered. <input type="checkbox"/> Registered user codes will be sorted in numerical order.
Change	Use to change your preset code to a new one.
Delete	Use to delete your user code. <input type="checkbox"/> The number of copies made under the code is deleted.

9 Check/Reset Specified Copy Counter

You can check the number of copies made using each user code. Also, you can clear each code's counter.

10 Print All Copy Counters

Use to print all copy counters made under the user code modes.

11 Reset All Copy Counters

Use to reset all user codes and counters.

CHAPTER 9

"REMARKS/PROBLEMS"

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USER REMARKS

- ☐ To maintain the copy image quality, the copier stops copying for 10 to 60 seconds and the "Wait" message will appear on the touch panel display in the following time frames.

1. About 10 seconds after about 50 copies.
2. About 1 minute after about 150 copies.
3. When using the dual job feeder, about 10 seconds after 150 copies. The copier automatically resumes copying after the waiting time.

The above 3 time frames are carried out independently. Sometimes one will follow the other.

- ☐ When copying from a colored original, the copier will scan the original 4 times for one copy. Be careful not to move the original during the scanning process. If the original is moved slightly, the colors (Cyan, Magenta, Yellow, and Black) might not combine properly.

WHAT TO DO WHEN THINGS GO WRONG

When there is a machine failure or a paper misfeed, a message will appear on the touch panel display. Follow the instructions to solve the problem.

Clearing Misfeeds

When a paper misfeed occurs, the misfeed location will appear on the touch panel display. Check the misfeed location and follow the instructions. (Also follow the instructions inside the machine door.)

WARNING: Since some parts of the copier are supplied with high electrical voltage, touch only the parts specified in the instructions inside the machine door.

WARNING: When removing misfed paper from section "D", use caution. The fusing unit might be very hot.

Notes:

- ☐ Do not leave any torn scraps of paper within the machine.
- ☐ After removing misfed paper, make sure that all units and levers are returned to their original positions and that all covers and doors are closed.
- ☐ If a paper misfeed occurs, the copier automatically keeps track of the selected copy modes and how many originals have been completed. It is unnecessary to reset the copy quantity, or the copy modes, after removing misfed paper.

Others

Problem	Action
Nothing happens when the main switch is turned on.	<input type="checkbox"/> Check the power cord. If it is not plugged in properly, plug it firmly into the outlet.
The Start key does not change from red to green within 12 minutes after the main switch is turned on, or the machine stops during a copy run.	<input type="checkbox"/> Check the touch panel display and follow the instructions.

Copies are dirty.

Problem	Action
The reverse side of an original image is copied.	<ul style="list-style-type: none"> <input type="checkbox"/> Adjust the image density level using the Manual Image Density keys. (☞ page 5-4) <input type="checkbox"/> If you select the Black Copy mode or Single Color mode, place a black paper in the backside of the original and select Auto Image Density mode. <input type="checkbox"/> If you select the Full Color Copy mode, lighten the background density. (☞ page 6-2)
A shadow is copied when copying a pasted original.	<ul style="list-style-type: none"> <input type="checkbox"/> Adjust the image density using the Manual Image Density keys. (☞ page 5-4)
The same part of a copy is dirty whenever making copies. An image not on the original appears on the copy.	<ul style="list-style-type: none"> <input type="checkbox"/> If the exposure glass or platen cover is dirty, clean it. (☞ page 1-6) If not, please contact your service representative.

Copies are too light.

Problem	Action
When copying from a black and white original, selecting Auto Color Select and Auto (Letter/Photo) modes, copies are light.	<ul style="list-style-type: none"> <input type="checkbox"/> Do not select Auto Color Select and Auto (Letter/Photo) modes together when copying from a black and white original. Select Black Copy mode or select Letter mode.
A low contrast image on an original is copied too light.	<ul style="list-style-type: none"> <input type="checkbox"/> Adjust the image density level using the Manual Image Density keys. (☞ page 5-4)
The add toner message appears displayed on the touch panel display.	<ul style="list-style-type: none"> <input type="checkbox"/> It is time to add toner. (☞ page 3-10)
When using rough surface paper, or any coated paper, the copies are light.	<ul style="list-style-type: none"> <input type="checkbox"/> Rough surface paper and any coated paper are not recommended as a copy paper.

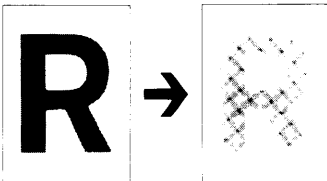
Copy image is blurred.

Problem	Action
Copy image is blurred.	<input type="checkbox"/> Select the image type mode as follows (☞ page 5-5): <ul style="list-style-type: none"> • When copying a map and you want to make the letters on the map clear, select the Letter mode. • When copying an original with letters and photo images, select Auto (Letter/Photo) mode. • When copying photo image or drawings, select Photo mode. <input type="checkbox"/> Adjust the sharpness and contrast of the image. (☞ page 6-2)

Color tone of copies is not reproduced well.

Problem	Action
Color tone of copies is too dark or too light.	<input type="checkbox"/> Adjust the image density level using the Manual Image Density keys. (☞ page 5-4)
Color tone of copies is different from that of originals.	<input type="checkbox"/> Adjust the Single Color or Color Balance. (☞ pages 6-3 or 6-5)
Color tone of copies is completely different from that of originals.	<input type="checkbox"/> Call your service representative.
Color tone of copies is uneven.	<input type="checkbox"/> If you are using damp paper, replace with dry, undamaged paper. <input type="checkbox"/> Press down on the platen cover where the copy image is uneven. <input type="checkbox"/> Call your service representative.

Moire is reproduced on copies.

Problem	Action
<p>A moire pattern is produced on copies as shown in the illustration.</p> 	<input type="checkbox"/> If you selected the Letter mode, cancel it and select the Auto (Letter/Photo) mode or Photo mode. (☞ page 5-5) <input type="checkbox"/> Adjust the sharpness to a softer level. (☞ page 6-2) <input type="checkbox"/> Place the original on the exposure glass at a slight angle.

CHAPTER 10

"PROJECTOR UNIT OPERATION"

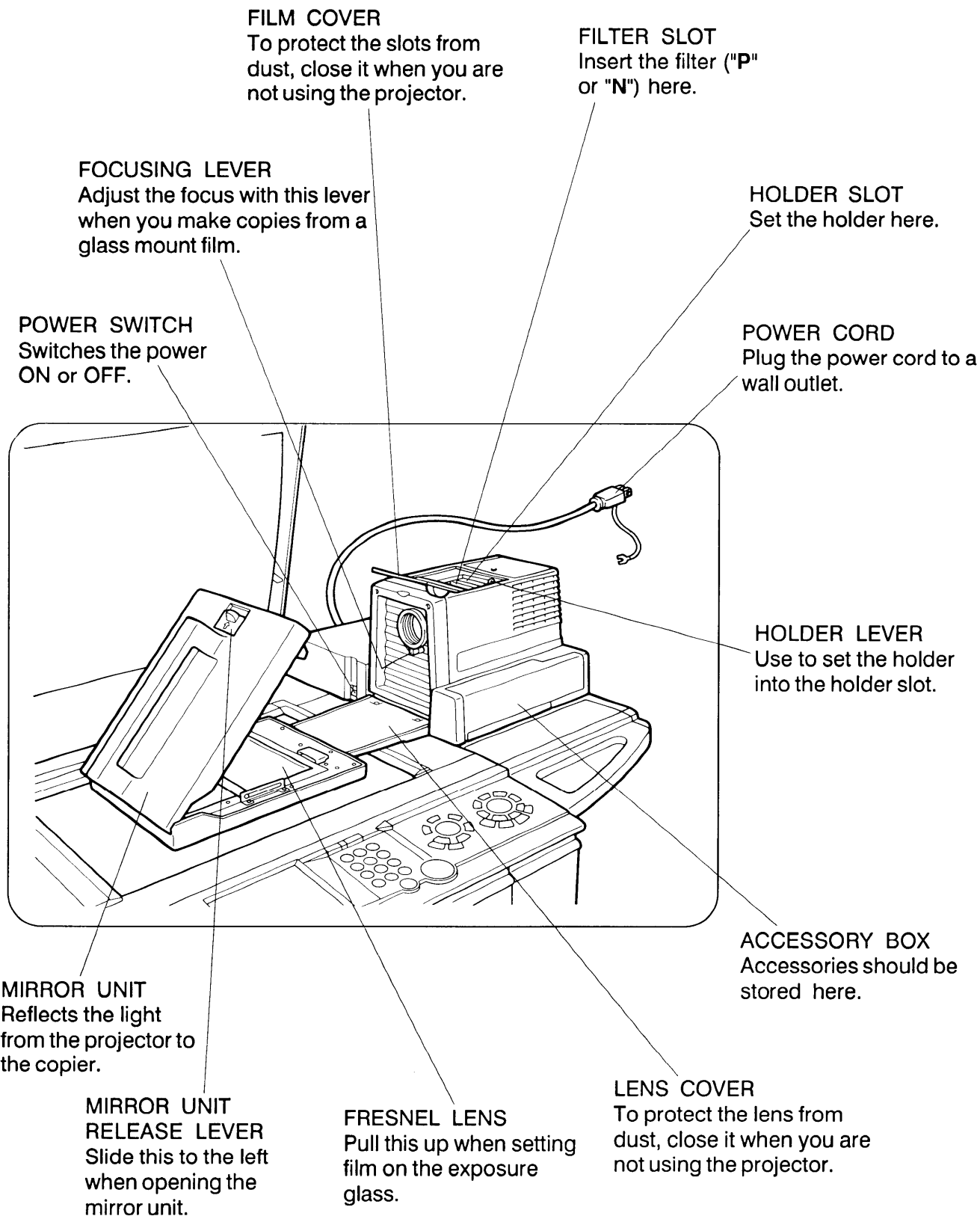
Table of Contents

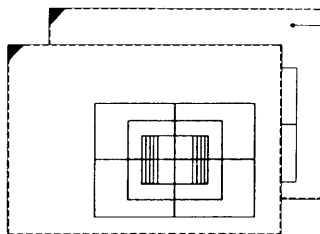
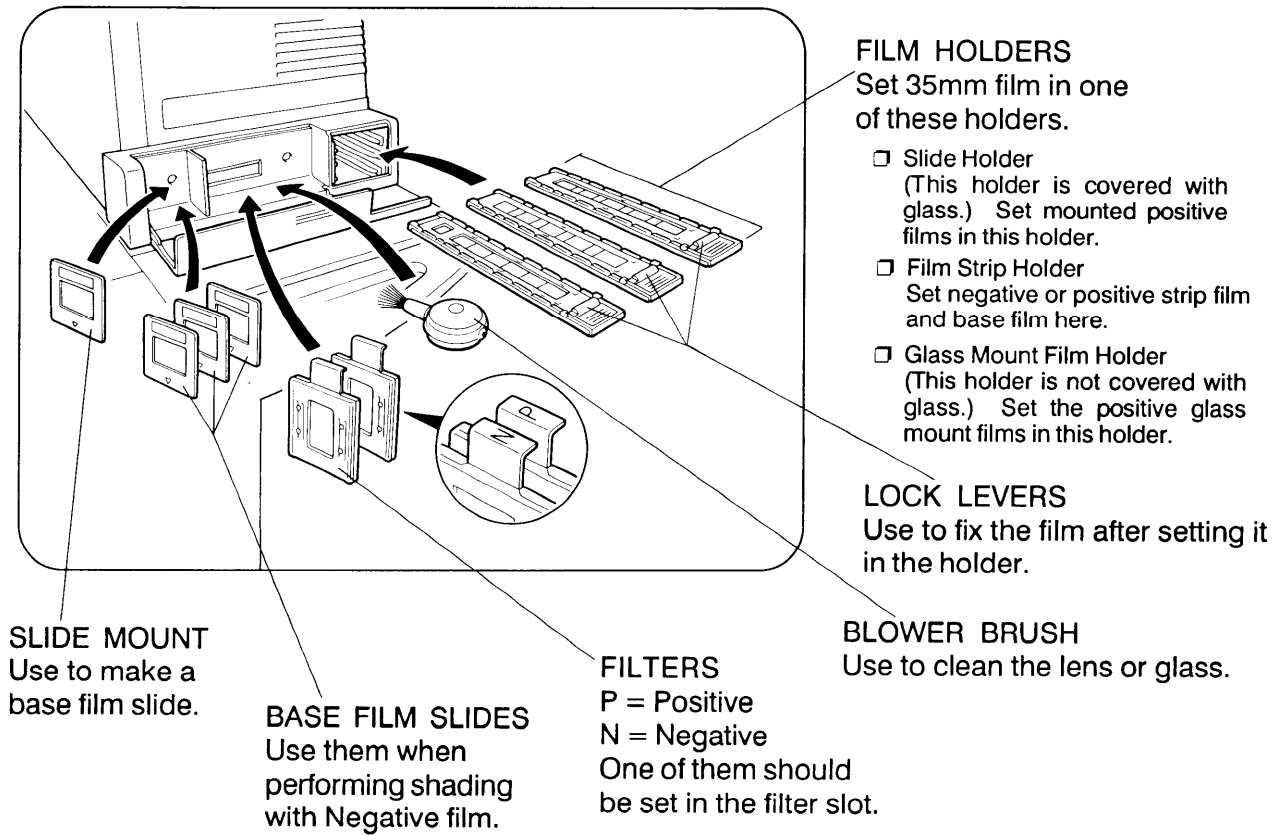
GUIDE TO COMPONENTS	10-2
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GUIDE TO COMPONENTS

10

PROJECTOR UNIT
OPERATION



**FILM POSITION SHEET**

Use a duplicate of this sheet to place the film to the correct position on the exposure glass. Make a copy from the original sheet, cut the surrounding margin on the dotted lines, and cut away the center part corresponding to the size of the film to be copied. Keep the original film position sheet.

BEFORE OPERATING THE PROJECTOR

About Film

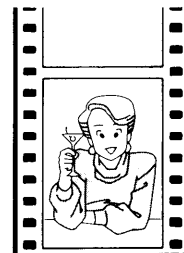
Caution: Do not use the same film for more than 30 minutes.

Caution: Do not store film in rooms where the temperature is more than 30°C/86°F.

- ☐ For valuable images, we recommend copying from duplicates.
- ☐ When using a film strip, make sure to take it out from film protecting sheet.

You can use the following kinds of films:

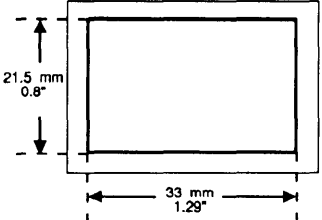
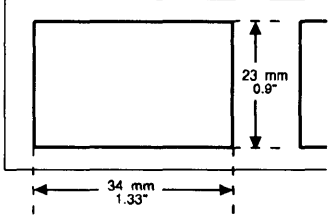
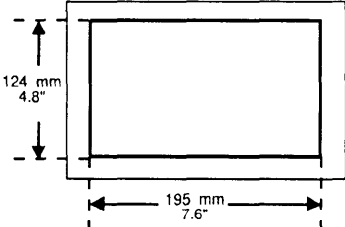
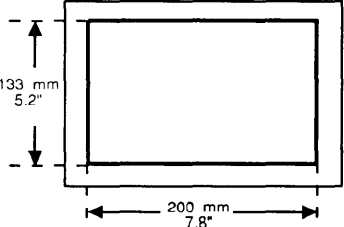
- ☐ 35mm Positive Slides
(Mount Film/Glass Mount Film)
- Glass mount film is covered with glass.
- ☐ 35mm Negative or Positive Strip Films



- ☐ Positive or Negative films of wider size
(Placing on the exposure glass):
 - 60 x 45 mm
 - 60 x 60 mm
 - 60 x 70 mm
 - 60 x 80 mm
 - 60 x 90 mm
 - 6 x 6 cm
 - 4" x 5"
 - **Maximum Size**
(140 x 210 mm or 5.5" x 8.2")

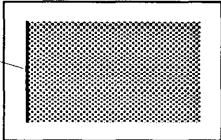


About Copying

	When using the Slide Film Holder	When using the Strip Film Holder
Available film area for copying		
The copy size when Full Size is selected.		

- ☐ A black line might appear on the edge of copies. This line is caused by the holder or the edge of the film.
- ☐ As the fresnel lens is used, a ring pattern on the center or moire pattern might appear on the copy image.

Black line



Notes For Operation

- ☐ First, you must perform shading to get the projector to register the condition of the film. This way, the projector can adjust the light intensity automatically while copying.
- ☐ You can adjust the color balance and color density manually.
- ☐ This projector has an automatic focus function, but if you use the glass mount film holder, adjust the focus manually.
- ☐ The shading method differs depending on the type of film (negative or positive). When making copies from a positive film, make sure to set the film after shading.
- ☐ The filter and the way to set it differ depending on the type of film.
- ☐ If you want to clear the data you just entered, touch the **Cancel** key. The screen returns to the previous page.
- ☐ If you want to go to the next page, touch the **Exit** key.
- ☐ If you are finished using the projector unit, press the **Clear Modes/Stand by** key.
- ☐ Do not forget to turn off the power switch of the projector when you are not using it.
- ☐ Do not obstruct the light path from the projector. If the light path is obstructed, the image might not match the original.
- ☐ The shading adjustment is very sensitive, so after the shading operation the mirror unit must be kept perfectly still. Do not move it or allow vibrations to interfere with it. If this happens during copying, lines might appear on the copy. In that case, you must perform shading again.
- ☐ To avoid the above problem, avoid touching or leaning on the copier or the projector after shading. Do not put anything on the copier while it is operating.
- ☐ If you need to open and close the doors (to clear a jam or add toner), we recommend that you perform shading again afterwards.
- ☐ Avoid multi-wiring. The projector should be connected to a power source as described on the inside of the front cover.

SETTING THE PROJECTOR IN POSITION

10

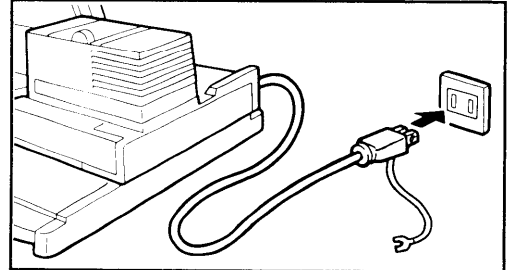
PROJECTOR UNIT OPERATION

- ☐ Do not touch to the fresnel lens or the glass of the mirror unit. Fingerprints or dirty parts might appear on the copy. If the fresnel lens becomes dirty, wipe it. (☞ page 10-23)

1. Insert the plug of the projector into the wall outlet.

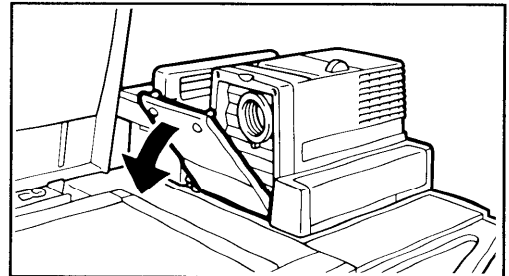
- ☐ Read the notes regarding the power cord. (☞ inside page or the front cover)

2. Turn on the main switch of the projector.



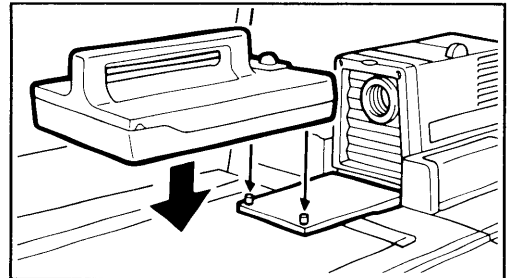
3. Open the lens cover of the projector.

- ☐ Inside the cover, there are two pins to position the mirror unit.

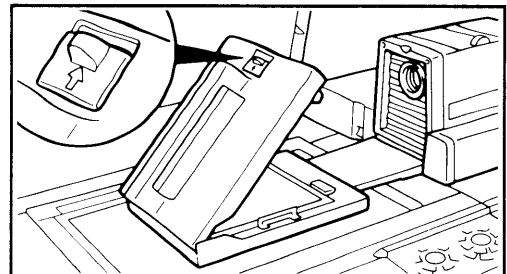


4. Place the mirror unit so that the unit's position holes fit over the projector's positioning pins.

- ☐ Please be careful not to scratch the exposure glass when setting the mirror unit on it.



5. Slide the release lever of the mirror unit in the direction of the arrow and open the cover of the mirror unit.



PREPARING FOR COPYING

Before operation, prepare as follows:

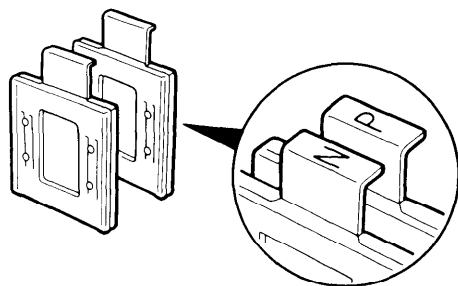
☐ Check the type of film you are going to use, and confirm what is required for copying.

Film Type			Filter	Base Film	Positioning Sheet	Holder	Key To Select
35 mm	Positive	Slide (Mount)	"P" (Positive Filter)	X	X	Slide Holder	35mm Slides Positive
		Slide (Glass Mount)	"P" (Positive Filter)	X	X	Glass Mount Film Holder	35mm Slides Positive
		Strip Film	"P" (Positive Filter)	X	X	Film Strip Holder	35mm Slides Positive
	Negative	Strip Film	"N" (Negative Filter)	O	X	Film Strip Holder	35mm Strip Negative
Others Max. Size: 140 x 210 mm 5.5" x 8.2"	Positive		"P" (Positive Filter)	X	O	X (Placing on the exposure glass)	Positive Film Under Lens
	Negative		"N" (Negative Filter)	O	O	X (Placing on the exposure glass)	Negative Film Under Lens

Selecting The Filter

☐ When perform shading, you must set a filter that matches the type of film you will copy.

Use an "N" filter for Negative films and a "P" filter for Positive films.



Selecting The Base Film (If Needed)

❑ When you use negative film for copying, use that film's appropriate base film for shading.

1. Confirm the manufacturer, model name, and ASA rating of the film you want to use.
2. Select a base film suitable for the film to copy.

❑ The following base film slides have been prepared as accessories.

*1	For FUJICOLOR SUPER HG-100
*2	For AGFA XRG-100
*3	For KODACOLOR GOLD-100

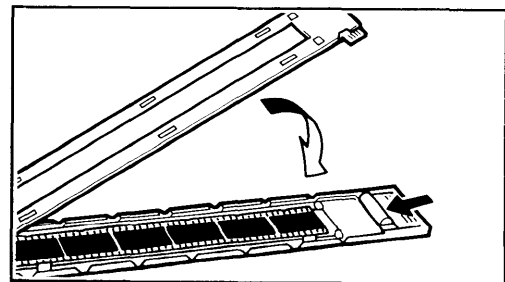
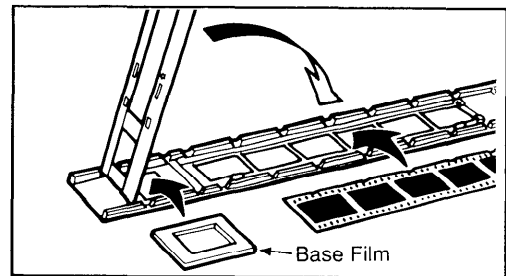
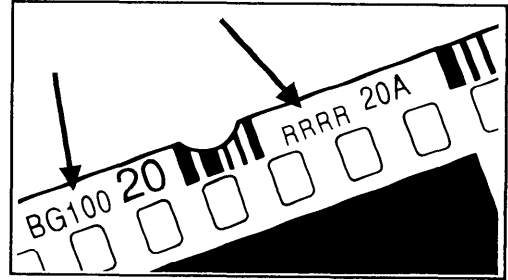
❑ *1 is a registered trademark of FUJI PHOTO COMPANY LIMITED.
 *2 is a registered trademark of AGFAGEVAERT AG.
 *3 is a registered trademark of EASTMAN KODAK COMPANY.

❑ If you use film that does not have suitable base film, you should make the base film yourself (see page 10-21.).

3. Open the film strip holder and set the base film in the film strip holder.

- ❑ The base film must be set sideways in the strip holder.
- ❑ There is no difference between both sides of the base film.
- ❑ You can set the negative strip film at the same time. (see page 10-9 "Setting Films In The Holder")

4. Close the holder and lock it as shown in the illustration.



Setting Films In The Holder (If Needed)

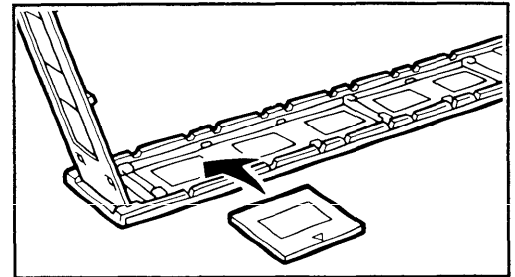
❑ Check which type of holder you should use.

Slide Holder/Glass Mount Film Holder

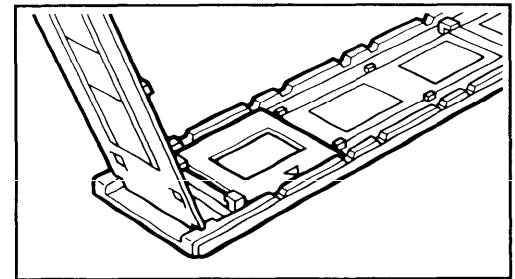
- ❑ **The slide holder is covered with glass.** Set the mount films in the slide holder.
- ❑ **The glass mount film holder is not covered with glass.** Set the glass mount films (covered by glass) in the glass mount film holder.
- ❑ Positive film is usually set in a slide mount or glass mount. If you use positive film not set in a mount, set it in the film strip holder (☞ Film Strip Holder).

1. Open the cover of the slide holder or glass mount film holder, and set the slides in the holder one by one.

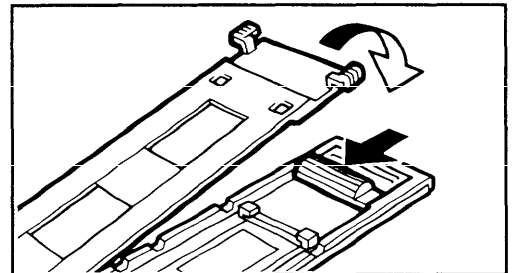
- ❑ Make the front side of the film face down when setting in the slide holder or glass mount film holder.



- ❑ When setting in the slide holder, make sure that all slides must be aligned to the glass of the slide holder cover.



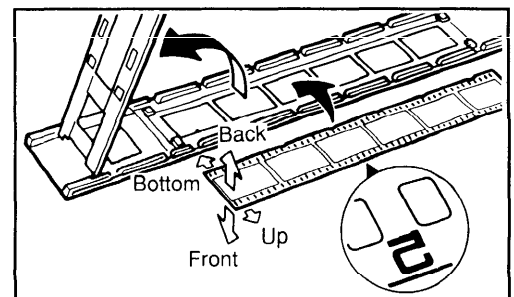
2. Close the holder and lock it as shown in the illustration.



Film Strip Holder

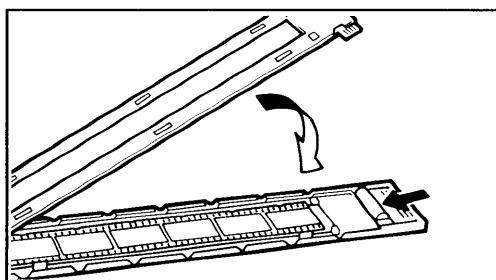
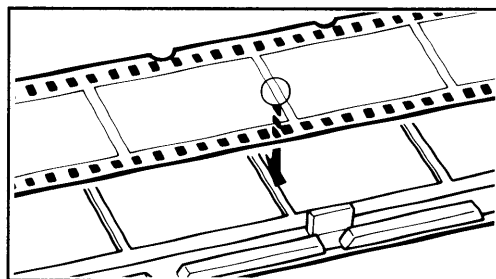
- ❑ Negative film usually come in strips.
- ❑ Follow this procedure for positive strip film as well.

1. Open the film strip holder. Put the front side of the film face down and set it in the film strip holder.



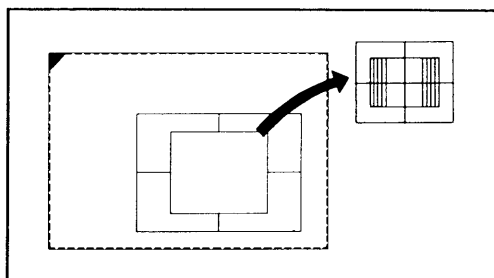
PREPARING FOR COPYING

- ☐ When setting film, leave the base film in the film strip holder. This is convenient when performing shading again.
2. Adjust the position of the film.
- ☐ Do not touch the image parts of the film when adjusting.
3. Close the film strip holder and lock it as shown in the illustration.

**Cutting The Film Position Sheet (If Needed)**

- ☐ If you do not use the holders and position the film on the exposure glass, a positioning sheet is required.

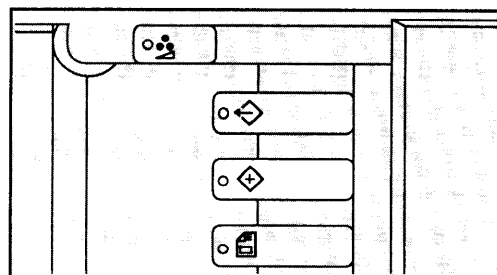
The positioning sheet should be cut in the center with the film size, so that you can place your film in the center. Two position sheets are included as originals in this machine, so, make a copy from the original sheet, cut the surrounding margin on the dotted lines, and cut away the center part corresponding to the size of the film to be copied.



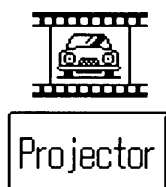
SELECTING FILMS

1. Press the **Option** key.

- ☐ If the projector is not equipped on your machine, or if the power switch of the projector is not on, the **Projector** key will not appear on the screen.



2. Touch the **Projector** key.



2. Check the type of film and touch one of the keys.

Film Type			Key To Select	Go To Page...
35 mm	Positive	Slide (Mount)	35mm Slides Positive	10-12
		Slide (Glass Mount)	35mm Slides Positive	10-12
		Strip Film	35mm Slides Positive	10-12
	Negative	Strip Film	35mm Strip Negative	10-13
Others Max. Size: 140 x 210 mm 5.5" x 8.2"	Positive		Positive Film Under Lens	10-14
	Negative		Negative Film Under Lens	10-15

SHADING


Before making copies, you must perform shading to get the projector to register the condition of the film. This way, the projector can adjust the light intensity automatically while copying.


35mm Slides
Positive

(Slide Holder/Glass Mount Film Holder/Film Strip Holder)

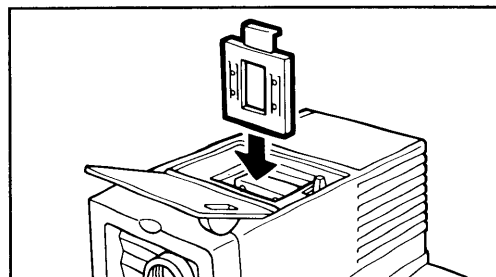
10

PROJECTOR UNIT
OPERATION

1. Set the film (slide or strip) in the holder.
( page 10-9)

2. Open the film cover and insert the "P" (Positive) filter ( page 10-7) in the left slot as shown in the illustration.


- ☐ Be careful to insert the filter as shown, *not* the other way around.
- ☐ Before going to the next step, make sure that the fresnel lens is lowered in position.

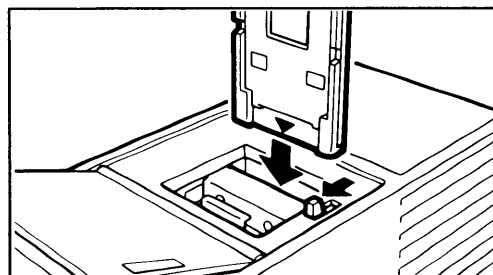


3. Touch the **Shading** key.

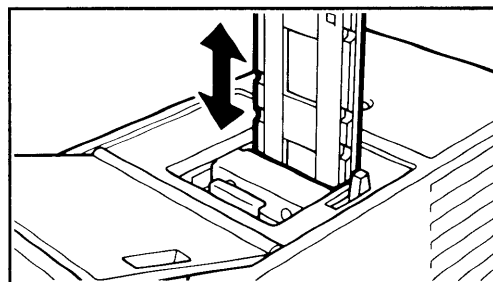
- ☐ The copier will start shading automatically.

Shading

4. Check if the film is correctly set ( page 10-9) in the holder. While pressing the holder lever to the right, insert the holder slightly in the right slot.

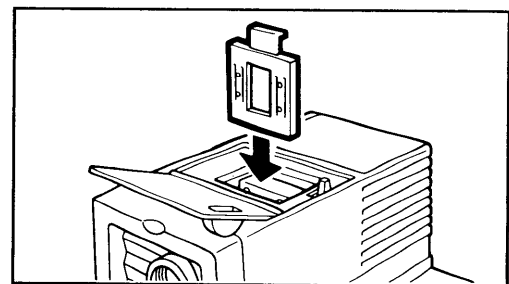
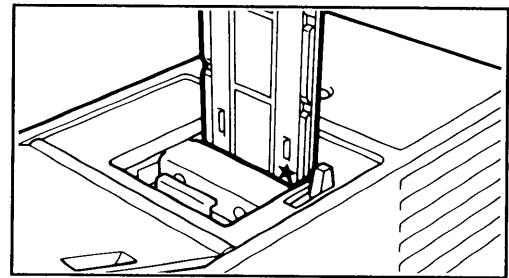
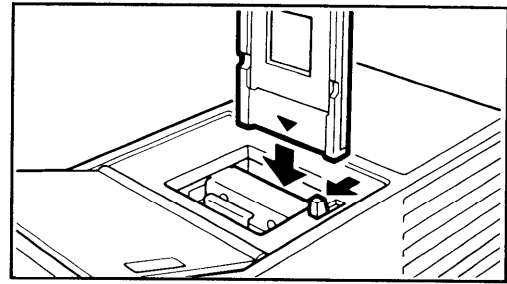


5. Adjust the holder by sliding it up and down to position the correct frame for copying.

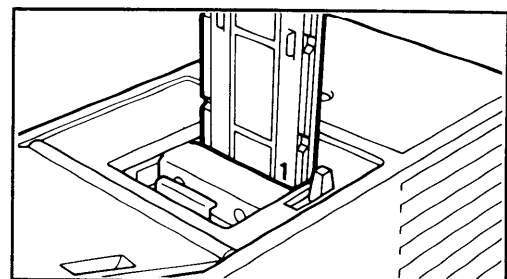


35mm Strip
Negative**(Film Strip Holder)**

1. Set the base film and film strip in the holder. (base film: page 10-8, film strip: page 10-9)
2. Open the film cover and while pressing the holder lever to the right, insert the film strip holder slightly to the right slot.
3. Insert the holder until the ☆ mark is placed as shown in the illustration.
4. Insert the "N" (Negative) filter (page 10-7) in the left slot as shown in the illustration.
 - ☐ Be careful to insert the filter as shown, *not* the other way around.
 - ☐ Before going to the next step, make sure that the fresnel lens is lowered in position.
5. Touch the **Shading** key.
 - ☐ The copier will start shading automatically.
6. Adjust the holder by sliding it up and down to position the correct frame for copying.



Shading



Positive Film
Under Lens

Positive Film Under The Lens

1. Insert the "P" (Positive) filter (see page 10-9) in the left slot as shown in the illustration.

- ☐ Be careful to insert the filter as shown, *not* the other way around..

2. Cut the positioning sheet to match the film size. (see page 10-10 "Cutting The Film Position Sheet")

3. Place the positioning sheet under the mirror unit (on the exposure glass).

- ☐ Place the marked corner of the film position sheet at the rear left corner of the exposure glass.
- ☐ Before going to the next step, make sure that the fresnel lens is lowered in position.

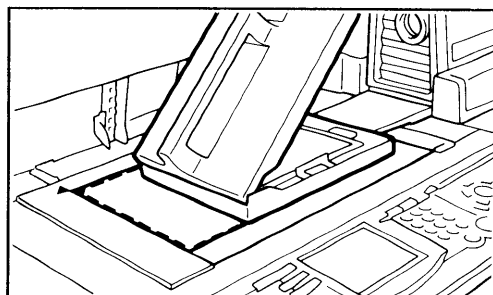
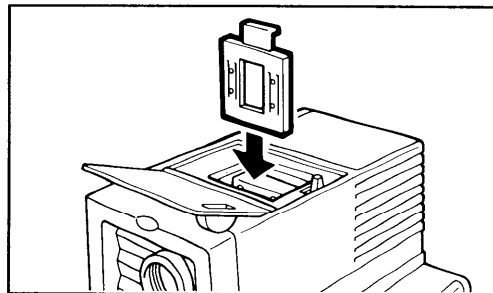
4. Touch the **Shading** key.

- ☐ The copier will start shading automatically.

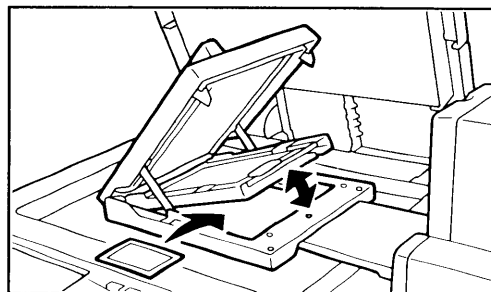
5. Lift the fresnel lens, place the film inside the film position sheet, and lower the fresnel lens.

- ☐ Place the film face down.
- ☐ If the film is curled, the copy image may be out of focus. In this case, make the cutout film position sheet a little smaller than the film size and use it to hold the film down.

6. Check the film size, touch one of the keys, and touch the **Exit** key.



Shading

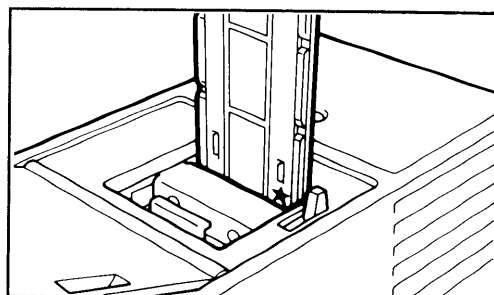
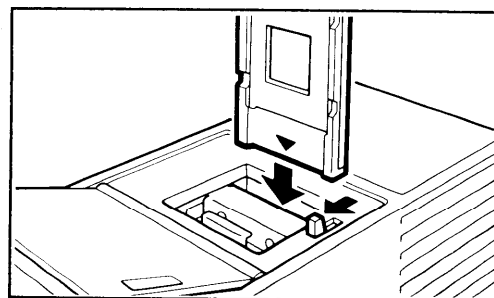


Film Size		Cancel	Exit
Select film size, then press Exit key.			
Special Sizes			
60x45mm	60x80mm	6x6cm Size	
60x60mm	60x90mm	4"x5" Size	
60x70mm		Max. Size	

Negative Film Under Lens

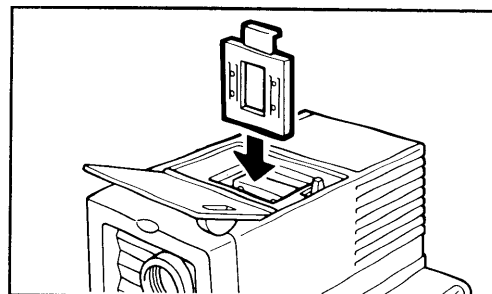
Negative Film Under The Lens

1. Set the base film in the film strip holder.
(☞ page 10-8)
2. Open the film cover and while pressing the holder lever to the right, insert the film strip holder slightly in the right slot.
3. Insert the holder until the ☆ mark is placed as shown in the illustration.



4. Insert the "N" (Negative) filter (☞ page 10-8) in the left slot as shown in the illustration.

☐ Be careful to insert the filter as shown, *not* the other way around..

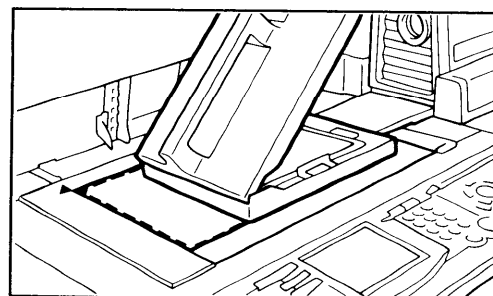


5. Cut the positioning sheet to match the film size. (☞ page 10-10 "Cutting The Film Position Sheet")

6. Place the positioning sheet under the mirror unit (on the exposure glass).

☐ Place the marked corner of the film position sheet at the rear left corner of the exposure glass.

☐ Before going to the next step, make sure that the fresnel lens is lowered in position.

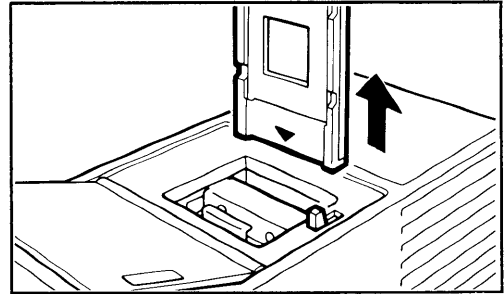


7. Touch the **Shading** key.

☐ The copier will start shading automatically.

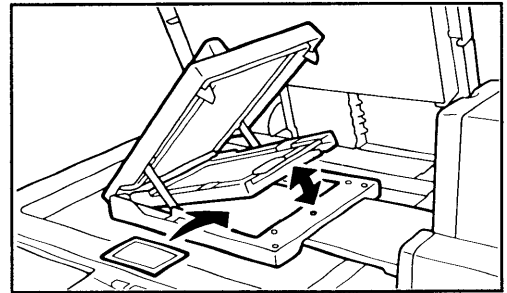
Shading

8. Pull out the film strip holder with the base film.

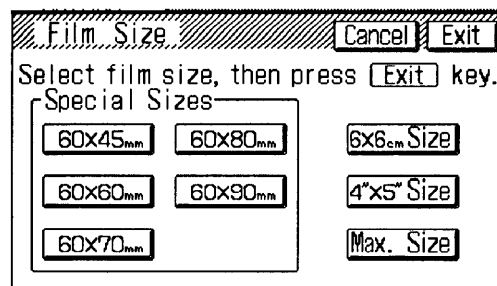


9. Lift the fresnel lens, place the film inside the positioning sheet, and lower the fresnel lens.

- ☐ Place the film face down.
- ☐ If the film is curled, the copy image may be out of focus. In this case, make the cut out film position sheet a little smaller than the film size and use it to hold the film down.



10. Check the film size, touch one of the keys, and touch the **Exit** key.



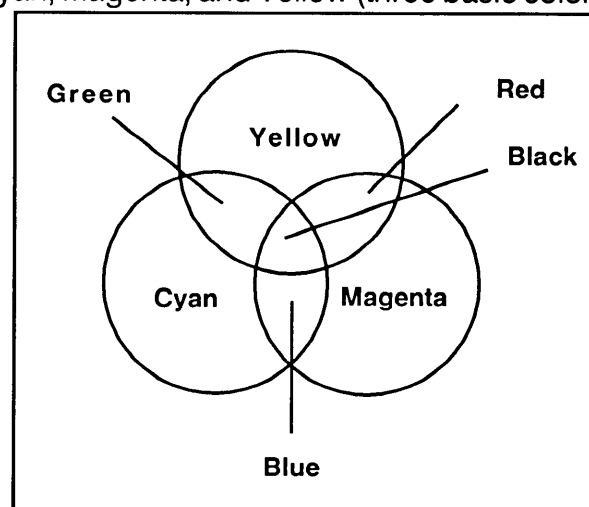
ADJUSTMENT

- ❑ After finishing to adjust the color balance, image density, or manual focusing, touch the **Exit** key.

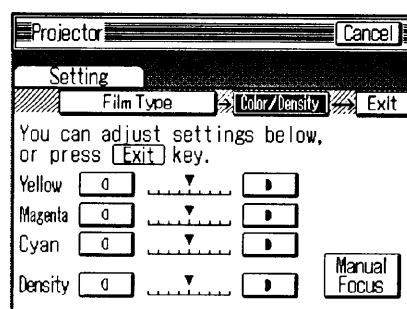
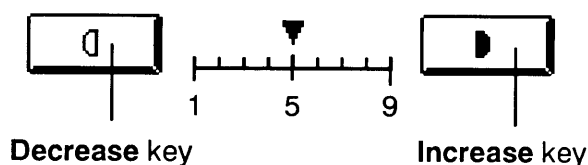
Color Tones In Film Scanning

Use these modes when you want to adjust the overall color tone of copies. Also use this mode when you use negative film, because the color tone of copies varies with the film brand. You can adjust the tone of copies by adjusting Cyan, Magenta, and Yellow (three basic colors).

- ❑ Area editing can be selected with the projector mode, but color balance/image density control for projector cannot be adjusted after area editing job setting is selected. Make sure to adjust the color balance and image density before pressing the **Area Editing** key.
- ❑ Suppose the copied image are rather green, there are two ways to adjust the color tone.
 - Lighten the Yellow and Cyan
 - Darken the complementary color = Magenta



Adjust the color balance with the **Increase** key and **Decrease** key.



- ❑ The color balance of a film corresponding to one of the three base films can vary depending on the type of film used and on the photoprocessing center that developed it. The color balance settings in the table below are standard adjustments. Please set them first, and if required, change the settings from these values.

	FUJICOLOR SUPER G-100	AGFA XRG-100	KODACOLOR SUPER Gold-100
Yellow	7	5	5
Magenta	4	4	4
Cyan	3	5	5

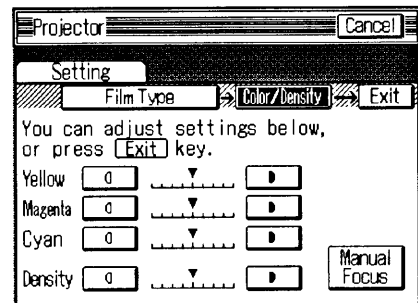
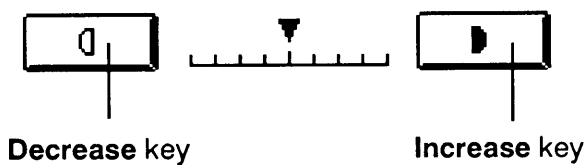
Notes on color tone adjustments:

- ☐ If the color balance differs slightly from your image, you can also change the tones with the Single Color Adjustment (☞ page 6-5) or Color Balance Adjustment (☞ page 6-3) function.
- ☐ If dark parts are too black, change the UCR adjustment to level 3 (default = level 5). (☞ page 8-4).

Image Density Adjustment

- ☐ Image density can be set not only with this display, but also as instructed on page 10-19. However, when adjusting for the projector, we recommend you adjust the image density with this display.

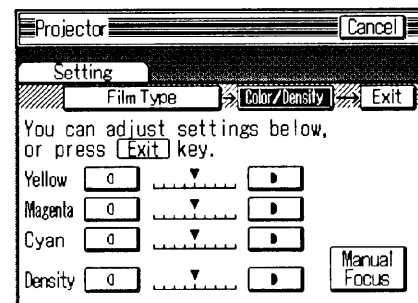
Adjust the Image density with the **In-**
crease key or **Decrease** key.



Focus Adjustment

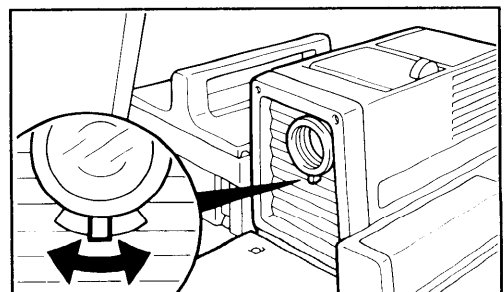
- ☐ When setting the glass mount film holder, manual focus adjustment is required.
- ☐ For other types of films, you can also adjust the focus manually.

1. Touch the **Manual Focus** key.



2. Place a white blank sheet under the mirror unit and adjust the focus with the focusing lever.

- ☐ After copying, return the focusing lever to the center.



SELECTING COPIER FUNCTIONS

You can select copier modes together with the projector.

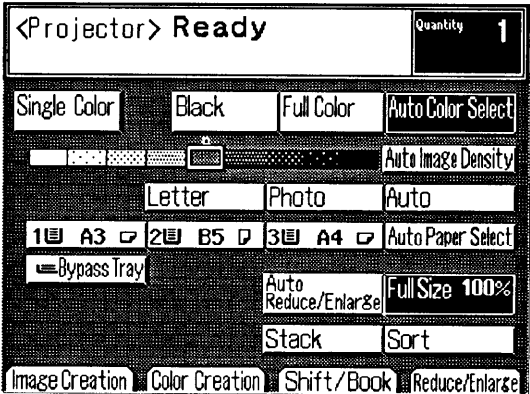
Modes that cannot be selected with the projector:

- ☐ User Color
- ☐ Preset mode
- ☐ Combine Two Originals mode
- ☐ Auto Image Density
- ☐ Memory Call (Recalling the previous job settings)
- ☐ Interrupt mode

1. Select the modes you want to choose.

- ☐ The operation is the same as described in Chapters 4 to 7.

2. Press the **Start** key.



SELECTING WHAT TO DO NEXT

After copying, you can select the next job as follows:

<div>Next Film</div>	If you want to copy the same film again, or if you want to copy another film which is of the same type, touch this key.
<div>Change Pos./Neg.</div>	If you want to change the type of film, touch this key.
<div>Shading</div>	If the mirror unit is moved, or if some lines appear on the copy, touch this key and perform shading again.
<div>Color/Density</div>	If you want to adjust the color tone, image density, or adjust the focus manually, touch this key.
<div>Exit Projector</div>	If you want to finish using the projector, touch this key.

- ☐ If you do not touch the **Exit Projector** key, all of the selected job settings remain.

EXITING PROJECTOR MODE

10

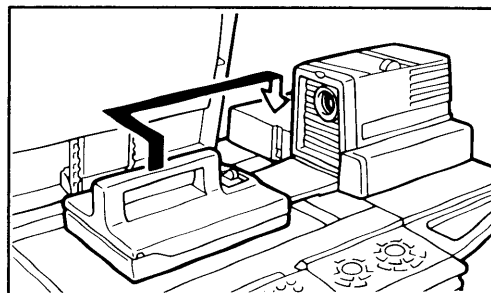
PROJECTOR UNIT OPERATION

1. Touch the **Exit Projector** key (or touch the **Clear Modes/Stand by** key).

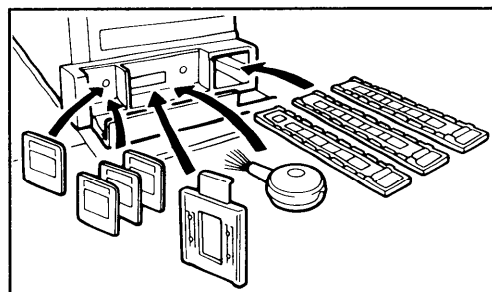


2. Replace the mirror unit to its original position.

- ☐ Be careful not to touch the fresnel lens. If you do touch it, clean it (see page 10-23)



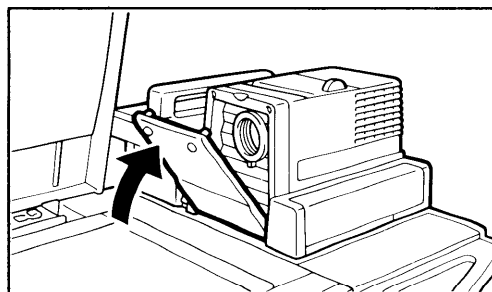
3. Return the holders, filters, and other accessories in the accessory box.



4. Close the lens cover.

5. Turn off the power switch.

- ☐ Though the power switch is turned off, the cooling fan may be still working. Therefore, please wait a few moments before unplugging the power cord.



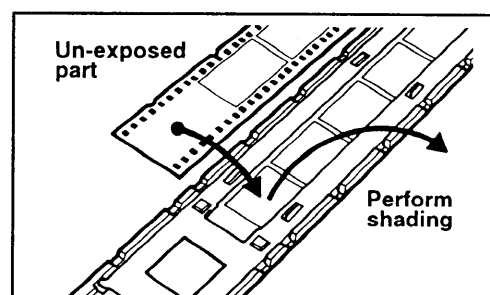
HINTS

1. If the color balance is improper.

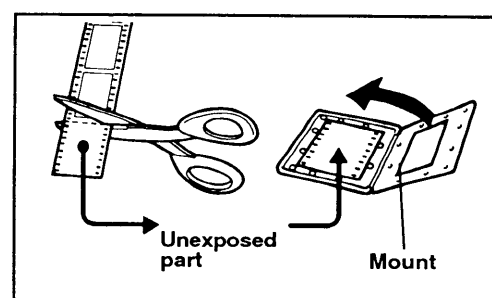
- ❑ If the color density leans to red or blue, or isn't properly balanced, perform the color density adjustment, and the color balance adjustments for Yellow, Magenta, and Cyan (☞ page 10-18).

2. If the film you want to copy does not match the types of base film included.

- ❑ If you do not plan on copying from this type of film often, use an unexposed frame of the same film strip, if available, when performing shading.



- ❑ If you plan on copying from this type of film often, make a base slide using an unexposed, developed frame of the film.
- ❑ If you have no blank unexposed frame of the same type of film, you can use an unexposed frame from film produced by the same company, but the colors might differ a bit.



3. If the copy image is out of focus

- ❑ Check if the image on the film is focused or not. If it is, make sure the film is correctly set in the holder.
- ❑ If you reset the film correctly in the holder and the image is still out of focus, or if you use a different image, and the copy image is out of focus in every case, please call your service representative.
- ❑ You can adjust the focus manually with the focusing lever (☞ page 10-18).

4. If the edge of the original image does not appear on the copy.

- ❑ Check the size of the area that can be copied (☞ page 10-15).
- ❑ When setting film in the holder, make sure to position the desired frame properly.
- ❑ To extend the area that can be copied, use the glass mount film holder and focus manually.

5. If the projection lamp does not light.

- ☐ If the projection lamp does not light and a service message appears on the screen, the lamp might be burned out. In this case, please call you service representative.

6. If you move the mirror unit.

- ☐ Make sure to perform the shading operation once again.

7. If lines appear on the copy.

- ☐ Perform the shading operation again.
- ☐ Some possible causes for the lines are:
 1. A long time has passed since shading.
 2. Many copies were made since shading and the mirror unit was moved by copier operation.
 3. Someone might have leaned on the machine or put something on it.
- ☐ If copying from negative film, thin black lines might appear on the lighter part of the copy, even after shading.

8. Black lines appear on the edge.

- ☐ These lines are shadows caused by the film holder and cannot be eliminated.
- ☐ If you have the optional display editor, you can improve this by saving the area.
(☞ page 7-20.)

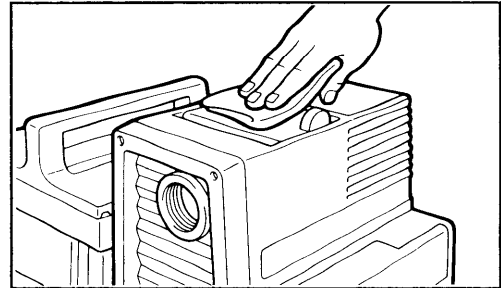
9. If a ring pattern appears on the copy.

- ☐ The ring pattern is present on the film itself, and the copier is sensitive enough to pick it up. Try to change the film setting direction. Adjusting the focusing lever so that the image is slightly out of focus will eliminate most of the pattern.
- ☐ Also, try to change the film status as follows:
 - Open and close the film cover.
 - Slide the film in the holder a bit.
 - Turn the film around in the holder.(Do not flip it over.)

DAILY MAINTENANCE

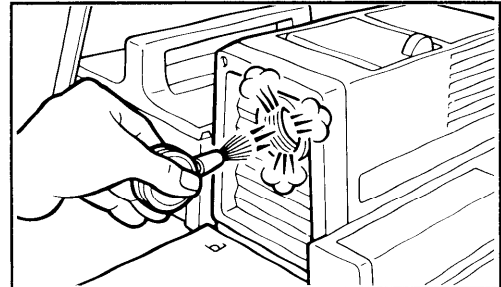
Exterior

Wipe with a dry soft cloth.



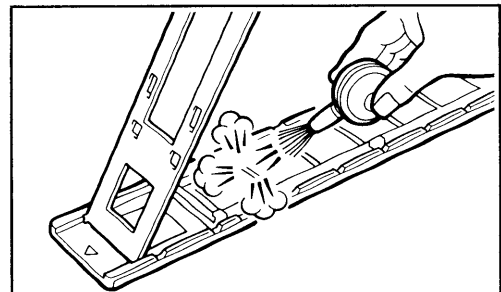
Lens

Blow off any dust using the blower brush. If there are fingerprints on the lens, wipe them with a soft cloth.



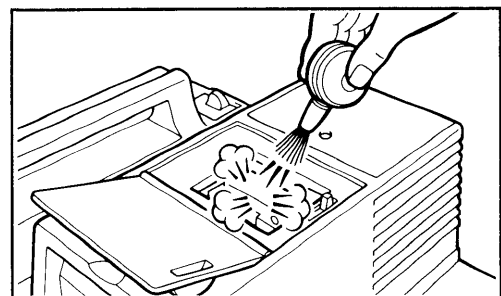
Film Holder

Blow off any dust using the blower brush. If there are finger prints on the glass, wipe with a soft cloth.



Holder Slot

Blow off any dust using the blower brush.



CHAPTER 11

"SPECIFICATIONS"



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






Main Frame







☐ Specifications are subject to change without notice.

Copier

- Configuration: Console
- Copy Process: Dry electrostatic transfer system
- Resolutions: 400 dpi
- Gradations: 256 gradations
- Original Type: Sheet/Book/Objects (less than 5 Kg/A4 or 11 lb/8 1/2" x 11")
- Original Size: Maximum: A3 , 11" x 17" 
- Original Alignment: Rear-left corner
- Copy Paper Weight:
 - Paper Tray: 64 - 104.7g/m² or 17 - 28 lb
 - Bypass Feed Tray: 64 - 157 g/m² or 17 - 42 lb
- ☐ When heavier than 104.7g/m² or 28 lb, use the bypass feed tray and select Thick Paper mode.

Available Copy Paper Size:

Tray		A4/A3 version	LT/DLT version
1st Tray		A3, A4, 8 1/2" x 13" (F4) 8 1/4" x 13"	11" x 17"(DLT), 11" x 15", 10" x 14", 8 1/2" x 14"(LG), 8" x 13"(F), 8 1/2" x 11"(LT), 8" x 10 1/2", 8" x 10"
		A4, A5	11" x 8 1/2"(LT), 8 1/2" x 5 1/2"(HLT)
2nd/3rd Tray Call your service representative		A3, B4, A4, B5, A5, 11" x 17"(DLT), 11" x 15", 10" x 14", 8 1/2" x 14"(LG), 8 1/2" x 13"(F4), 8 1/4" x 13", 8" x 13"(F), 8 1/2" x 11"(LT), 8" x 10 1/2", 8" x 10", 5 1/2" x 8 1/2"(HLT)	
		A4, B5, A5, 11" x 8 1/2"(LT), 8 1/2" x 5 1/2"(HLT)	
Bypass Feed Tray		A3, B4, A4, B5, A5, B6, A6	11" x 17" (DLT), 10" x 14", 8 1/2" x 11" (LT), 8" x 13" (F), 5 1/2" x 8 1/2" (HLT)
		A4, B5, A5, B6, 8 1/2" x 11" (LT)	8 1/2" x 11" (LT), 5 1/2" x 8 1/2" (HLT)
	Odd Size	Horizontal Direction: 148 - 432 mm or 5.8" - 17" Vertical Direction: 100 - 297 mm or 3.9" - 11.7"	

Warm-up Time:	About 8.5 minutes (at 20°C or 68°F)
First Copy Time: (A4 or 8 1/2" x 11")	<ul style="list-style-type: none"> • Full Color (4 scans): 15.5 seconds • Single Color: <ul style="list-style-type: none"> Black, Yellow, Magenta, Cyan: 9.0 seconds Red, Green, Blue, Orange, Light Green: 11.0 seconds <p><input type="checkbox"/> When selecting OHP/Thick Paper modes, copying speed is reduced.</p> <p><input type="checkbox"/> After changing some modes, the first copy time will take longer than usual.</p>
Copying Speed: (Standard modes)	<ul style="list-style-type: none"> • Full Color (4 scans): <ul style="list-style-type: none"> A4  or 8 1/2" x 11" : 6 copies/minute A3 or 11" x 17": 3 copies/minute • Single Color (Black, Yellow, Magenta, Cyan): <ul style="list-style-type: none"> A4  or 8 1/2" x 11" : 31 copies/minute A3 or 11" x 17": 15 copies/minute • Single Color (Red, Green, Blue, Orange, Light Green): <ul style="list-style-type: none"> A4  or 8 1/2" x 11" : 10 copies/minute A3 or 11" x 17": 5 copies/minute <p><input type="checkbox"/> When selecting OHP/Thick Paper modes, copying speed is reduced.</p>
Non-reproduction Area:	<ul style="list-style-type: none"> • Leading edge: 5±2 mm or 0.2"±0.08" • Side: 2±2 mm or 0.08"±0.08", Total less than 4 mm or 0.16" • Trailing edge: 2±2mm or 0.08"±0.08"
Copy Number Input:	Number keys, 1 to 99
Automatic Reset:	1 minute standard setting; can also be set to 10 to 999 seconds in 1 second steps, or to no auto reset.
Paper Feed:	Paper Tray x 3 (500 sheets of paper each) Bypass Feed Tray (50 sheets of paper when lighter than 104.7g/m ² or 28 lb)
Copy Tray Capacity:	100 sheets of paper
Toner Replenishment:	Bottle type (340g/bottle)
Reproduction Ratio:	<ul style="list-style-type: none"> • A4/A3 version: 25%, 50%, 65%, 71%, 75%, 82%, 93%, 100% (Full Size), 115%, 122%, 141%, 200%, 400% + User ratio x 2 • LT/DLT version: 25%, 50%, 65%, 74%, 77%, 85%, 93%, 100% (Full Size), 121%, 129%, 155%, 200%, 400% + User ratio x 2
Zoom:	From 25% to 400% in 1% steps

Power Source:	☞ inside page of the front cover.
Power Consumption: (Copier only)	<ul style="list-style-type: none">• Maximum: ☞ inside page of the front cover.• Warm-up: 1.25kW• Stand-by: 0.5kW• Copy Cycle: 1.15kW
Noise Emission Sound Pressure Level: The measurements are made according to ISO7779.	<ul style="list-style-type: none">• Maximum: Copier Only: less than 62 dB (A) Full System: less than 69 dB (A)• Stand-by: Copier Only: less than 40 dB (A) Full System: less than 44 dB (A)• Copy-cycle: Copier Only: less than 56 dB (A) Full System: less than 58 dB (A)
Dimensions (W x D x H):	<ul style="list-style-type: none">• Copier Only: 692 x 685 x 1026 mm or 27.3" x 27.0" x 40.4"• Full System*: 1524 x 685 x 1099mm or 60.0" x 27.0" x 43.2" (* = Copier + Dual Job Feeder + Sorter + Display Editor + Holder)
Weight:	<ul style="list-style-type: none">• Copier Only: 200 kg or 440.8 lb
Optional Equipment:	<ul style="list-style-type: none">• Dual Job Feeder• Sorter• Sorter Adapter• Projector Unit• Display Editor• Holder for Projector Unit/Display Editor• Key Counter

Optional Equipments

☐ Specifications are subject to change without notice.

Dual Job Feeder

Original Size:	☞ page 4-3
Original Thickness:	☞ page 4-3
Original Feed:	<ul style="list-style-type: none">• Automatic Feed - ADF mode• Manual feed One by One - SADF mode• Auto Reverse Feed - ARDF mode
Original Type Capacity:	50 sheets (A4 or 8 1/2" x 11", 80g/m ² or 20 lb)
Original Set:	Face up - First sheet on top
Original Transport:	One flat belt
Power Source:	DC24V, less than 2A (average) from copier
Power Consumption:	70W
Weight:	Approximately 13 kg or 28.7 lb
Dimensions (W x D x H):	680 x 508 x 116 mm or 26.8" x 20.0" x 4.6"

Sorter

Paper Size for Bins:	Maximum: A3 or 11" x 17" Minimum: A5 or 5 1/2" x 8 1/2"
Paper Thickness:	52 - 90 g/m ² or 14 - 24 lb
Number of Bins:	10 bins + print bin + interrupt bin (total 12 bins)
Bin Capacity:	Sort mode: 50 sheets/bin (A4 or 8 1/2" x 11") Stack mode: 40 sheets/bin (A4 or 8 1/2" x 11")
Top Bin Capacity:	150 sheets (A4 or 8 1/2" x 11")
Print Bin Capacity:	500 sheets (A4 or 8 1/2" x 11") 150 sheets (other size)
Interrupt Bin Capacity:	100 sheets (A4 or 8 1/2" x 11")
Power Source:	DC 24V from the copier
Power Consumption:	30W
Dimensions (W x D x H):	499 x 535 x 600 mm 19.6" x 21.1" x 23.6"
Weight:	Approximately 22 Kg or 49 lb
Interface Requirement:	A sorter adapter (850 g) is needed.

Display Editor

Original Size:	Maximum: A3☐, or 11" x 17"☐ (Scanned through the copier.)
Display:	LCD (Monochrome), 8 gradations 640 x 480 dots
Zoom In/Out:	100% (33 dpi), 150% (50 dpi), 200% (67 dpi), 300% (100 dpi)
Display Speed:	Less than 2 seconds
Editing:	Screen and cursor
Power Consumption:	19.5W
Power Source:	5V/less than 1.5A and 24V/less than 10.5 from the copier.
Dimensions (W x D x H):	280 x 232 x 50 mm 11.0" x 9.14" x 1.97"
Weight:	less than 1.5 Kg or 33.1 lb

☐ Remarks: The holder is required for installation.

Projector Unit

Acceptable Film Type:	<ul style="list-style-type: none"> • Type: Positive film/Negative film • Size: 35 mm Others: 60 x 45 mm, 60 x 60 mm, 60 x 70 mm 60 x 80 mm, 60 x 90 mm, 6 cm x 6 cm 4" x 5" Max: 140 x 210 mm or 5.5" x 8.2" • Mount: Yes (Up to 5 frames can be set in a film holder.) • Strip: Yes (A series of 6 frames can be set in a film holder.)
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Focusing:	Fixed/Manual
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Effective Film Area:	<ul style="list-style-type: none"> • 35 mm: Approx. 22.2 x 33.3 mm • Other Sizes: Full Size
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Projection Ratio	<ul style="list-style-type: none"> • 35 mm: Approx. x 6 • Other Sizes: x 1
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Copy Image Size	<ul style="list-style-type: none"> • 35mm mount: 124 x 195 mm • 35mm strip: 133 x 200 mm • Other Sizes: Full Size
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☐ The reproduction features of the copier are available.

Power Source:	 inside page of the front cover.
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Power Consumption:	Maximum: 55W
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Dimensions (W x D x H):	<p>Projector: 300 x 442 x 204 mm 11.8" x 17.4" x 8.03"</p> <p>Mirror Unit: 295 x 232 x 50 mm 11.61" x 9.13" x 1.97"</p>
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Weight:	11 kg or 24.3 lb
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☐ Remarks: The holder is required for installation.